BOSCH INJ. PUMP TEST SPECIFICATIONS : 4.00...4.10 Prestroke mm : (3.95...4.15) Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 8- 7- 2- 6- 3- 5-Note inst. in remarks column : MB 14,6 A 4 Test sheet : 05.11.86 Edition Superceeded Calibrating oil : ISO-4113 SD ang. spacing CS: 0-45-90-135-180-225-270-315 Combination no. : 0 401 848 755 Tolerance + - 0 : 0.50 (0.75) Injection pump Pump designation : PE8P110A320LS3802-10 SD mark cyl. no. : 8 EP type number : 0 411 818 710 BASIC SETTING Governor Governor design. : RQ300/1150PA437-3 1/mi: 1150 Governer no. : 0 421 801 230 1st speed Contr.-rod trav.mm: 11.00...11.10 Customer-spec. information : DAIMLER-BENZ Customer Del.quantity cm3/: 11.3...11.5 Engine : 0M422 100H.: (11.0...11.7) 1st version kW : 184.0 cm3/:0.4Speed 1/min: 2300 Dispersion 100H.: (0.8) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C 2nd speed 1/min: 300.0 Contr.-rod trav. m: 8.5...8.7

Del.quantity cm3/: 1.4...2.0

100H.: (1.1...2.2)

Dispersion cm3/: 0.4 : 38...42 Overflow valve : 1 417 413 025 100H.: (0.7) Inlet press., bar: 1.50 SLEEVE POSITION Control-lever position Over flow Degree: -1 1/min: 650 quantity min. 1/h: 100...120 Speed Cont.-rod travelmm: 13.20...14.00 Calibrating nozzle-holder assembly : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP Opening. pressure, bar : 172...175 1st version Speed 1/min: 1150 Del.quantity cm3/: 113.0...115.0 1000H:: (110.5...117.5) cm3/: 4.00 Test inj. tubing : 1 680 750 015 Dispersion 1000H.: (8.00) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x1.50x600 x Length mm (A) Injection pump setting values Setting point: Speed 1/min : 650 Insp. values in parentheses Contr.-rod trav.mm: 13.6 Set constant delivery quant. per values ____ Testing: 1st c-rod trav.mm : 10.00 Speed 1/min : 1195...1210 START OF DELIVERY Test pressure, bar: 25...27 2nd c-rod trav.mm : 4.00

```
Speed 1/min: 1260...1290
4th speed 1/min: 1350
  C-rod trav.mm
                     : 0.00...1.50
LOWEST RATED SPEED I
Setting point w/out aux. spring
Speed 1/min: 300
Contr.-rod trav.mm: 7.1
Testing:
              1/min : 100
Speed
C-rod trav.mm min: 8.50
             1/min : 300
mm : 7.00...7.20
mm : 2.00
Speed
C-rod trav.mm
C-rod trav.mm
             1/min : 400...440
Speed
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1150
 C-rod trav.mm : 11.00...11.10
2nd speed 1/min: 600
  C-rod trav.mm : 11.20...11.40
FUEL-DELIVERY CHARACTERISTICS
              1/min : 600
Speed
Del.quantity cm3/: 92.0...96.0
              1000H.: (89.0...99.0)
cm3/: 6.00
1000H.: (9.00)
Dispersion
```

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                      Contr.-rod trav.mm: 9.00...12.00
                                                      Cam sequence : 1-5-3-6-2-4
Note inst. in remarks column
Test sheet
                   : PEN 6,1 N
                                                      SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300
Tolerance + - : 0.50 (0.75)
                   : 14.11.86
Edition
Superceeded
                   : 11.85
                  : ISO-4113
Calibrating oil
                                                     BASIC SETTING
Combination no.
                   : 0 403 476 044
                                                                     1/mi: 700
                                                      1st speed
Injection pump
Pump designation
                   : PES6MW100/320RS1132
                                                      Contr.-rod trav.mm: 11.30...11.40
EP type number
                    : 0 413 406 124
                                                     Del.quantity cm3/: 8.2...8.4
Governor
Governor design.
                   : RSV650...750MW4/311-
                                                                    100H.: (8.0...8.6)
Governer no.
                   : 0 420 085 023
                                                     Dispersion
                                                                    cm3/:0.35
Customer-spec. information
Customer
                   : VOLVO-PENTA
                                                                    100H.: (0.6)
Engine
                   : TD 61 G
                                                                    1/min: 650.0
                                                      2nd speed
                                                      Contr.-rod trav. m: 6.3...6.4
                                                     Del.quantity cm3/: 1.7...2.1
100H:: (1.5...2.2)
Dispersion cm3/: 0.35
100H:: (0.5)
1st version kW : 83.0
              1/min: 1500
Speed
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                                                      SLEEVE POSITION
                    : 38...42
                                                      Control-lever position
                                                                   Degree: -3
Overflow valve
                                                                   17min: 800
                    : 1 417 413 000
                                                     Cont.-rod travelmm: 0.30...1.00
Inlet press., bar: 1.50
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Calibrating nozzle-holder
                                                     1st version
                                                                    1/min: 700
                  : 0 681 343 009
 assembly
                                                     Speed
                                                     Del.quantity cm3/: 82.0...84.0
1000H.: (80.0...86.0)
Dispersion cm3/: 3.50
1000H.: (6.00)
Opening
 pressure, bar : 172...175
Test inj. tubing : 1 680 750 014
                                                     HIGHEST RATED SPEED
                                                     1st version
Outside diameter
                                                     Control-lever
                                                      position degrees: 33...41
x Wall thickness
                   : 6.00x2.00x600
x Length mm
                                                     Testing:
                                                     1st c-rod trav.mm : 10.30
Speed 1/min : 750...760
(A) Injection pump setting values
    Insp. values in parentheses
                                                     2nd c-rod trav.mm : 4.00
Speed 1/min : 765...795
    Set constant delivery quant.
    per values ____
                                                      4th speed 1/min: 950
START OF DELIVERY
                                                                         : 0.30...1.70
                                                        C-rod trav.mm
Test pressure, bar: 30...32
                                                     LOWEST RATED SPEED I
Prestroke mm : 2.90...3.00
                                                     Control-lever
                   (2.85...3.05)
                                                      position degrees: 27...35
A03
```

Setting point w/out aux. spring Speed 1/min: 650 Contr.-rod trav.mm: 5.8...5.9

Testing:

Speed 1/min: 100 C-rod trav.mm min: 19.00 Speed 1/min: 650

Speed 1/min: 650 C-rod trav.mm: 5.80...5.90

. J.00...J.90

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                     Contr.-rod trav.mm: 9.00...12.00
                                                     Cam sequence : 1-5-3-6-2-
Note inst. in remarks column
Test sheet
                   : PEN 6,1 P 2
                                                     SD ang. spacing ^{0}CS: 0-60-120-180-240-300 Tolerance + - ^{0}: 0.50 (0.75)
Edition
                   : 28.10.86
Superceeded
                   : 11.85
Calibrating oil
                 : ISO-4113
                                                     BASIC SETTING
Combination no.
                   : 0 403 476 045
                                                     1st speed
                                                                   1/mi: 700
Injection pump
Pump designation : PES6MW100/320RS1132
                                                     Contr.-rod trav.mm: 12.80...12.90
EP type number
                   : 0 413 406 124
                                                     Del.quantity cm3/: 11.3...11.5
Governor
                   : RSV650...750MW4/311-
Governor design.
                                                                   100H.: (11.1...11.7)
                   : 0 420 085 024
Governer no.
                                                     Dispersion
                                                                   cm3/: 0.35
Customer-spec. information
                   : VOLVO-PENTA
                                                                   100H.: (0.6)
Customer
Engine
                   : TID 61 KG
                                                     2nd speed
                                                                   1/min: 650.0
                                                     Contr.-rod trav. m: 6.2...6.3
Del.quantity cm3/: 1.7...2.1
100H.: (1.5...2.2)
1st version kW : 102.0
              1/min: 1500
Speed
                                                                   cm3/: 0.35
                                                     Dispersion
                                                                   100H.: (0.5)
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                                                     SLEEVE POSITION
                   : 38...42
                                                     Control-lever position
                                                                  Degree: -3
1/min: 800
Overflow valve
                                                     Cont.-rod travelmm: 0.30...1.00
                    : 1 417 413 000
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar : 1.50
Calibrating nozzle-holder
                                                     1st version
             : 0 681 343 009
                                                                   1/min: 700
 assembly
                                                     Speed
                                                     Del.quantity cm3/: 113.0...115.0
1000H.: (111.0...117.0)
Dispersion cm3/: 3.50
Opening
 pressure, bar : 172...175
                                                                  1000H.: (6.00)
Test inj. tubing : 1 680 750 014
                                                     HIGHEST RATED SPEED
                                                     1st version
                                                     Control-lever
Outside diameter
x Wall thickness
                                                      position degrees: 34...42
x Length mm
                   : 6.00x2.00x600
                                                     Testing:
                                                     1st c-rod trav.mm : 11.80
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                       Speed 1/min: 750...760
                                                     2nd c-rod trav.mm : 4.00
    per values ____
                                                       Speed 1/min: 780...810
                                                     4th speed 1/min: 950
                                                       C-rod trav.mm : 0.30...1.70
START OF DELIVERY
Test pressure, bar: 30...32
                                                     LOWEST RATED SPEED I
Prestroke mm : 2.90...3.00
                                                     Control-lever
                   : (2.85...3.05)
                                                      position degrees: 27...35
```

A05

Setting point W/out aux. spring Speed 1/min: 650 Contr.-rod trav.mm: 5.7...5.8

Testing:

Testing:
Speed 1/min: 100
C-rod trav.mm min: 19.00
Speed 1/min: 650
C-rod trav.mm : 5.70...5.80

SET IDLE AUXILIARY SPRING Speed 1/min: 650 Contr.-rod trav.mm: 6.20...6.30

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                        Contr.-rod trav.mm: 9.00...12.00
Cam sequence : 1-5- 3- 6- 2- 4
Note inst. in remarks column
Test sheet
                    : MB 6.0 D 18
: 14.11.86
                                                        SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75)
Edition
Superceeded
Calibrating oil
                    : ISO-4113
                                                        BASIC SETTING
Combination no.
                     : 0 403 476 057
                                                        1st speed
                                                                      1/mi: 1280
Injection pump
                    : PES6MW100/720RS1129-
                                                        Contr.-rod trav.mm: 11.90...12.00
Pump designation
                     : 0 413 406 140
                                                        Del.quantity cm3/ : 9.3...9.5
EP type number
Governor
Governor design. : RSV300...1300MW0A324
                                                                       100H.: (9.1...9.7)
Governer no.
                    : 0 420 085 079
                                                                       cm3/: 0.35
                                                        Dispersion
Customer-spec. information
                                                                       100H.: (0.6)
Customer
                     : OM 366 LA
Engine
                                                        2nd speed
                                                                       1/min: 300.0
                                                        Contr.-rod trav. m: 5.9...6.1
Del.quantity cm3/: 0.8...1.4
100H.: (0.7...1.5)
1st version kW : 150.0
               1/min: 2600
Speed
                                                                       cm3/: 0.35
100H.: (0.5)
                                                        Dispersion
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                                                        SLEEVE POSITION
                    : 38...42
                                                        Control-lever position
                                                                     Degree: -3
1/min: 800
Overflow valve
                     : 1 417 413 000
                                                        Cont.-rod travelmm: 0.30...1.00
                                                        FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar : 1.50
Calibrating nozzle-holder
                                                        1st version
           : 0 681 343 009
                                                                       1/min: 1280
 assembly
                                                        Speed
                                                        Charge press. hPa : 900
                                                        Del.quantity cm3/: 93.5...95.5
1000H:: (91.5...97.5)
Dispersion cm3/: 3.50
Opening
 pressure, bar : 172...175
                                                                     1000H.: (6.00)
Test inj. tubing : 1 680 750 015
                                                        HIGHEST RATED SPEED
Outside diameter
                                                        1st version
x Wall thickness
                                                        Control-lever
                                                         position degrees: 56...64
                    : 6.00x1.50x600
x Length mm
                                                        Testing:
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                        1st c-rod trav.mm : 10.90
                                                        Speed 1/min: 1320...1330
2nd c-rod trav.mm: 4.00
    per values ____
                                                        Speed 1/min: 1385...1415
4th speed 1/min: 1450
START OF DELIVERY
                                                          C-rod trav.mm : 0.30...1.70
Test pressure, bar: 30...32
                    : 3.70...3.80
                                                       LOWEST RATED SPEED I
Frestroke mm
                    : (3.65...3.85)
                                                        Control-lever
A07
```

```
position degrees: 22...30
Setting point w/out aux. spring Speed 1/min: 300
Contr.-rod trav.mm: 5.9...6.1
Testing:
             1/min : 100
Speed
C-rod trav.mm min : 7.60
Speed 1/min : 300
C-rod trav.mm
                 : 5.90...6.10
SET IDLE AUXILIARY SPRING
Contr.-rod trav.mm: 2.00
 compensator (LDA,ADA,ALDA)
1st version
Setting
             1/min : 500
Speed
Pressure
            hPa
Contr.-rod trav.mm: 9.90...10.00
Measurement
            1/min : 500
Speed
1st pressure hPa : 175
                   : 10.40...10.60
  C-rod trav.mm
                  : 300
2nd pressure hPa
  C-rod trav.mm
                   : 11.20...11.40
                  : 900
3rd pressure hPa
  C-rcd trav.mm
                   : 11.90...12.00
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 900
            1/min : 750
Speed
Del.quantity cm3/: 83.5...86.5
             1000H.: (81.0...89.0)
              cm3/:5.00
Dispersion
             1000H.: (7.00)
Charge press. hPa : -
Speed
             1/min : 500
Del.quantity cm3/: 46.5...48.5
1000H.: (44.5...50.5)
Remarks:
Check electrically unlatched starting
fuel delivery (EE$) with 24 volt.
```

```
: 1-5-3-6-2-4
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                      Cam sequence
Note inst. in remarks column
Test sheet
                                                      SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0.50 (0.75)
                   : MB 8,7 P 2
: 12.09.86
Edition
Superceeded
Calibrating oil : ISO-4113
                                                      BASIC SETTING
Combination no. : 0 403 546 008
                                                      1st speed
                                                                      1/mi: 1250
                                                      Contr.-rod trav.mm: 12.90...13.00
Injection pump
Pump designation : PE6MW100/720RS1126
                                                      Del.quantity cm3/ : 9.7...9.9
EP type number : 0 413 506 101
Governor
                                                                     100H.: (9.5...10.1)
Governor design. : RQ300/1250MW12-2
Governer no.
                  : 0 420 082 020
                                                      Dispersion
                                                                     cm3/:0.35
Customer-spec. information
Customer
                                                                     100H.: (0.6)
                                                                     1/min: 300.0
Engine
                    : 0M360A
                                                      2nd speed
                                                      Contr.-rod trav. m: 8.6...8.7

Del.quantity cm3/: 1.0...1.4

100H.: (0.7...1.6)

Dispersion cm3/: 0.35

100H.: (0.5)
1st version kW : 147.0
              1/min: 2500
Speed
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                                                      SLEEVE POSITION
                    : 38...42
                                                      Control-lever position
                                                                   Degree: -2
Overflow valve
                                                      Speed
                                                                    17min: 650
                                                      Cont.-rod travelmm: 13.10...13.90
                    : 1 417 413 000
                                                      FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar: 1.50
Calibrating nozzle-holder
                                                      1st version
                   : 0 681 343 009
                                                                     1/min: 1250
 assembly
                                                      Speed
                                                      Del.quantity cm3/: 97.0...99.0
1000H:: (95.0...101.0)
Dispersion cm3/: 3.50
Opening.
pressure, bar : 172...175
                                                                    1000H.: (6.00)
Test inj. tubing : 1 680 750 014
                                                      HIGHEST RATED SPEED
                                                      1st version
                                                      Control-lever
Outside diameter
                                                       position degrees: 42...50
x Wall thickness
                  : 6.00x2.00x600
x Length mm
                                                      Setting point:
(A) Injection pump setting values
                                                      Speed 1/min : 650
    Insp. values in parentheses
Set constant delivery quant.
                                                      Contr.-rod trav.mm: 13.5
                                                      Testing:
    per values ____
                                                      1st c-rod trav.mm : 11.90
                                                      Speed 1/min: 1295...1310
2nd c-rod trav.mm: 4.00
START OF DELIVERY
Test pressure, bar: 30...32
                                                                   1/min : 1415...1445
                                                        Speed
                    : 3.80...3.90
                                                      3rd c-rod trav.mm : 0.10...1.00
Prestroke mm
                    : (3.75...3.95)
                                                        Speed 1/min: 1550
Contr.-rod trav.mm: 9.00...12.00
A09
```

```
LOWEST RATED SPEED I
Control-lever
position degrees: 13...21
Setting point W/out aux. spring
Speed 1/min: 300
Contr.-rod trav.mm: 8.6...8.7

Testing:
Speed 1/min: 220
C-rod trav.mm min: 10.40
Speed 1/min: 300
C-rod trav.mm : 8.6...8.7
C-rod trav.mm : 8.6...8.7
C-rod trav.mm : 2.00
Speed 1/min: 430...470

FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 750
Del.quantity cm3/: 90.5...94.5
1000H.: (88.5...96.5)
Dispersion cm3/: 5.00
1000H.: (7.00)
```

```
: 1-,8- 7- 2- 6- 5-
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                    Cam sequence
Note inst. in remarks column
Test sheet
                  : KHD 12,7 B
                                                   SD ang. spacing CS: 0-45-90-135-180-225-
                  : 12.09.86
Edition
Superceeded
                  : 12.85
                                                                         270-315
                                                    Tolerance + - 0
                 : ISO-4113
                                                                       : 0.50 (0.75)
Calibrating oil
Combination no.
                  : 0 403 548 001
                                                    BASIC SETTING
                                                                  1/mi: 750
Injection pump
                                                    1st speed
Pump designation
                  : PE8MW100/720LS1010
EP type number
                                                    Contr.-rod trav.mm: 12.20...12.30
                   : 0 413 508 001
Governor
Governor design. : RQ300/1150MW17
                                                    Del.quantity cm3/: 13.1...13.3
Governer no.
                  : 0 420 082 005
                                                                 100H.: (12.9...13.5)
Customer-spec. information
                                                                 cm3/: 0.35
Customer
                                                    Dispersion
                   : BF8L413F
                                                                 100H.: (0.6)
Engine
                                                                 1/min: 300.0
1st version kW : 212.0
                                                    2nd speed
                                                    Contr.-rod trav. m: 6.3...6.5
             1/min: 2300
Speed
                                                   Del.quantity cm3/: 1.2...1.6
                                                                 100H.: (1.0...1.9)
cm3/: 0.35
100H.: (0.5)
TEST BENCH REQUIREMENTS
                                                    Dispersion
Calibrating-oil inlet temp. °C
                   : 38...42
                                                    SLEEVE POSITION
Overflow valve
                                                    Control-lever position
                   : 1 417 413 000
                                                                Degree: -2
                                                   Speed
                                                                 17min: 650
Inlet press., bar: 1.50
                                                    Cont.-rod travelmm: 18.20...20.80
                                                   FULL-LOAD DELIV. AT FULL-LOAD STOP
Calibrating nozzle-holder
              : 0 681 343 009
 assembly
                                                   1st version
                                                                 1/min: 750
Opening
                                                    Speed
                                                   Charge press. hPa : 740
Del.quantity cm3/ : 131.0...133.0
pressure, bar : 172...175
                                                   1000H.: (129.0...135.0)
Dispersion cm3/: 3.50
Test inj. tubing : 1 680 740 014
                                                                1000H.: (6.00)
Outside diameter
                                                   HIGHEST RATED SPEED
x Wall thickness
                  : 6.00x2.00x600
                                                   1st version
x Length mm
                                                   Control-lever
                                                    position degrees: 29...37
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                   Setting point:
    per values ____
                                                   Speed 1/min : 650
                                                   Contr.-rod trav.mm: 19.5
START OF DELIVERY
Test pressure, bar: 30...32
                                                   Testing:
                                                   1st c-rod trav.mm : 9.20
                                                   Speed 1/min: 1195...1210
2nd c-rod trav.mm: 4.00
Prestroke mm
                   : 3.10...3.20
                   : (3.05...3.25)
Contr.-rod trav.mm: 9.00...12.00
                                                              1/min : 1240...1270
                                                     Speed
A11
```

```
3rd c-rod trav.mm : 0.00...1.00
  Speed 1/min : 1400
LOWEST RATED SPEED I
Control-lever
 position degrees: 6...14
Setting point w/out aux. spring
Speed
         1/min : 300
Contr.-rod trav.mm: 6.3...6.5
Testing:
Speed
            1/min : 100
C-rod trav.mm min : 7.80
Speed 1/min : 300
C-rod trav.mm : 6.3...6.5
C-rod trav.mm
                 : 2.00
Speed
           1/min : 365...405
TORQUE CONTROL
Torque-control curve - 1st version
           1/min : 750
1st speed
  C-rod trav.mm : 12.20...12.30
3rd speed 1/min : 1050
  C-rod trav.mm : 11.20...11.40
4th speed 1/min: 1150
  C-rod traw.mm : 10.20...10.50
 compensator (LDA, ADA, ALDA)
1st version
Setting
            1/min : 500
Speed
            hPa : 740
Pressure
Contr.-rod trav.mm: 12.20...12.30
Measurement
           1/min : 500
Speed
1st pressure hPa : -
  C-rod trav.mm : 9.90...10.00
2nd pressure hPa : 160
  C-rod trav.mm : 10.30...10.60
3rd pressure hPa : 500
                  : 11.80...11.90
  C-rod trav.mm
SWITCH-OVER POINT
        1/min : 230 (250)
Speed
FUEL-DELIVERY CHARACTERISTICS
Charge press. hPa : -
           1/min : 500
Speed
Del.quantity cm3/: 87.5...89.5
1000H.: (85.5...91.5)
```

fuel delivery (EES) with 24 volt.

Remarks: Check electrically unlatched starting

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet Edition : KHD 12,7 C1 : 12.09.86 Superceeded : 9.82 Calibrating oil : ISO-4113

: 0 403 548 604 Combination no.

Injection pump

Pump designation : PE8MW100/720LS1010

EP type number : 0 413 508 001

Governor

Governor design. : RQ300...1250MW32 Governer no. : 0 420 082 008

Customer-spec. information Customer : KHD

: BF8L413F Engine

1st version kW : 235.0 Speed 1/min: 2500

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C

: 38...42

Overflow valve

: 1 417 413 000

Inlet press., bar : 1.50

Calibrating nozzle-holder

: 0 681 343 009 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 740 014

Outside diameter

x Wall thickness

: 6.00x2.00x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values

START OF DELIVERY

Test pressure, bar: 30...32

: 3.10...3.20 Prestroke mm

: (3.05...3.25) Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1-8-7-2-6-5- 4-3	3rd c-rod trav.mm : 0.001.00 Speed 1/min : 1500
SD ang. spacing CS: 0-45-90-135-180-225- 270-315 Tolerance + - 0 : 0.50 (0.75)	LOWEST RATED SPEED I Control-lever position degrees: 917 Setting point w/out aux. spring Speed 1/min: 300 Contrrod trav.mm: 6.46.6
	Testing:
1st speed 1/mi: 1250	Speed 1/min: 100 C-rod trav.mm min: 8.10
Contrrod trav.mm: 12.2012.30	Speed 1/min : 300 C-rod trav.mm : 6.46.6
Del.quantity cm3/: 13.013.2	C-rod trav.mm : 2.00 Speed 1/min : 375415
100H.: (12.813.4)	TORQUE CONTROL
Dispersion cm3/: 0.35	Torque-control curve - 1st version
100H.: (0.6)	1st speed
2nd speed 1/min: 300.0 Contrrod trav. m: 6.46.6 Del.quantity cm3/: 1.21.6 100H.: (1.01.9) Dispersion cm3/: 0.35 100H.: (0.5)	2nd speed 1/min: 950 C-rod trav.mm: 12.4012.60 3rd speed 1/min: 1200 C-rod trav.mm: 12.2012.30 4th speed 1/min: 1250 C-rod trav.mm: 12.2012.30
1	compensator (LDA,ADA,ALDA)
SLEEVE POSITION Control-lever position Degree: -2 Speed 1/min: 600 Controd travelmm: 19.2020.80 FULL-LOAD DELIV. AT FULL-LOAD STOP	1st version Setting Speed 1/min: 500 Pressure hPa: 300 Contrrod trav.mm: 11.9012.00
1st version	Measurement Speed 1/min: 500 1st pressure hPa: 700 C-rod trav.mm: 12.712.8 2nd pressure hPa: 225
1000H.: (6.00)	C-rod trav.mm : 10.4010.70 3rd pressure hPa : - C-rod trav.mm : 9.709.80
1st version Control-lever I	FUEL-DELIVERY CHARACTERISTICS
position degrees: 2937 Setting point: Speed 1/min: 600 Contrrod tray.mm: 20.0	1st version Charge press. hPa : 700 Speed 1/min : 850 Del.quantity cm3/ : 130.5134.5 1000H.: (128.5136.5)
Testing:	Dispersion cm3/: 5.00 1000H.: (7.00) Charge press. hPa:- Speed 1/min: 500
A14	

Del.quantity cm3/: 84.5...86.5 1000H.: (82.5...88.5)

Check electrically unlatched starting fuel delivery (EES) with 24 volt.

```
Cam sequence : 1-8-7-2-6-5-
4-3
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
Test sheet
Edition
Superceeded
                   : KHD 13,4 D1
                                                      SD ang. spacing CS: 0-45-90-135-180-225-
                   : 12.09.86
                   : 12.85
                                                                             270-315
Calibrating oil : ISO-4113
                                                      Tolerance + - 0
                                                                           : 0.50 (0.75)
Combination no. : 0 403 548 013
                                                      BASIC SETTING
Injection pump
                                                                   1/mi: 900
                                                      1st speed
Pump designation : PE8MW100/720LS1117
EP type number : 0 413 508 101
                                                      Contr.-rod trav.mm: 12.50...12.60
Governor
Governor design. : RQV425...900MW66
                                                      Del.quantity cm3/: 10.7...10.9
Governer no. : 0 420 083 097
                                                                     100H.: (10.5...11.1)
Customer-spec. information
Customer
                    : KHD
                                                      Dispersion
                                                                     cm3/: 0.35
                    : F 8L 513 OPT.
                                                                     100H.: (0.6)
Engine
                                                      2nd speed 1/min: 425.0
Contr.-rod trav. m: 7.4...7.5
1st version kW : 153.0
Speed
             1/min: 1800
                                                      Del.quantity cm3/: 1.3...1.7
                                                                     100H.: (1.1...2.0)
cm3/: 0.35
100H.: (0.5)
TEST BENCH REQUIREMENTS
                                                      Dispersion
Calibrating-oil inlet temp. °C
                    : 38...42
                                                       (B) Setting of injection pump with
Overflow valve
                                                           externally-mounted governor
                    : 1 417 413 000
                                                      SLEEVE TRAVELS
Inlet press., bar: 1.50
                                                      1st speed 1/min: 940
                                                      Sleeve travel mm: 8.70...8.90
2nd speed 1/min: 990
Sleeve travel mm: 9.40...10.00
Calibrating nozzle-holder
              : 0 681 343 009
 assembly
                                                      3rd speed 1/min: 550
Sleeve travel mm: 3.20...4.00
Opening.
pressure, bar : 172...175
                                                      4th speed 1/min: 425
                                                        Sleeve travel mm: 1.40...2.20
Test inj. tubing : 1 680 740 014
                                                      SLEEVE POSITION
                                                      Control-lever position
                                                                    Degree: -1
1/min: 900
Outside diameter
x Wall thickness
                                                      Speed
                : 6.00x2.00x600
                                                      Cont.-rod travelmm: 15.20...17.80
x Length mm
                                                      FULL-LOAD DELIV. AT FULL-LOAD STOP
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                      1st version
    per values ____
                                                      Speed
                                                                     1/min: 900
                                                      Del.quantity cm3/: 107.0...109.0
1000H:: (105.0...111.0)
Dispersion cm3/: 3.50
START OF DELIVERY
Test pressure, bar: 30...32
                                                                    1000H.: (6.00)
Prestroke mm
                    : 3.10...3.20
                                                      HIGHEST RATED SPEED
                    : (3.05...3.25)
Contr.-rod trav.mm: 9.00...12.00
                                                      1st version
```

A16

```
Control-lever
 position degrees: 51...59
Testing:
1st c-rod trav.mm : 11.50
           1/min : 940...950
  Speed
2nd c-rod trav.mm : 4.50
Speed 1/min: 1000...1030
3rd c-rod trav.mm: 0.00...1.00
  Speed
          1/min : 1150
LOWEST RATED SPEED I
Control-lever
position degrees: 20...28
Setting point w/out aux. spring
           1/min : 425
Speed
Contr.-rod trav.mm: 7.4...7.5
Testing:
            1/min : 100
Speed
C-rod trav.mm min : 9.00
Speed
           1/min : 425
                 : 7.4...7.5
C-rod trav.mm
CONSTANT REGULATION
Speed
            1/min : 450...750
TORQUE CONTROL
Torque-control curve - 1st version
           1/min : 900
1st speed
  C-rod trav.mm : 12.50...12.60
          1/min : 675
2nd speed
  C-rod trav.mm : 13.00...13.10
3rd speed 1/min : 775
  C-rod trav.mm : 12.70...12.90
FUEL-DELIVERY CHARACTERISTICS
Speed
            1/min : 675
Del.quantity cm3/: 111.5...113.5
            1000H.: (109.5...115.5)
             cm3/: 5.00
Dispersion
            1000H.: (7.00)
Remarks:
Check electrically unlatched starting
fuel delivery (EES) with 24 volt.
```

```
: 1- 8- 7- 2- 6- 5-
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                     Cam sequence
Note inst. in remarks column
Test_sheet
                   : KHD 13,4 D5 : 24.11.86
                                                     SD ang. spacing CS: 0-45-90-135-180-225-
Edition
                   : 12.09.86
                                                                           270-315
Superceeded
                                                     Tolerance + - D
                                                                         : 0.50 (0.75)
Calibrating oil : ISO-4113
Combination no.
                   : 0 403 548 015
                                                     BASIC SETTING
Injection pump
                                                                    1/mi: 1150
                                                     1st speed
Pump designation : PE8MW100/720LS1117
EP type number : 0 413 508 101
                                                     Contr.-rod trav.mm: 11.80...11.90
Governor
Governor design. : RQV450...1150MW70
                                                     Del.quantity cm3/ : 9.0...9.2
Governer no.
                  : 0 420 083 103
                                                                   100H.: (8.8...9.4)
Customer-spec. information
                                                     Dispersion
                                                                   cm3/: 0.35
Customer
                   : KHD
Engine
                   : F 8L 513
                                                                   100H.: (0.6)
1st version kW : 155.0
                                                                   1/min: 450.0
                                                     2nd speed
                                                     Contr.-rod trav. m: 7.6...7.7
              1/min: 2300
Speed
                                                     Del.quantity cm3/: 1.3...1.7
                                                                   100H.: (1.1...2.0)
cm3/: 0.35
100H.: (0.5)
TEST BENCH REQUIREMENTS
                                                     Dispersion
Calibrating-oil inlet temp. °C
                   : 38...42
                                                     SLEEVE POSITION
Overflow valve
                                                     Control-lever position
                   : 1 417 413 000
                                                                  Degree: -1
                                                                   17min: 1170
                                                     Speed
                                                     Cont.-rod travelmm: 15.20...17.80
Inlet press., bar: 1.50
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Calibrating nozzle-holder
                : 0 681 343 009
 assembly
                                                     1st version
                                                                   1/min: 1150
Opening
                                                     Speed
                                                    Del.quantity cm3/: 90.0...92.0
1000H: (88.0...94.0)
Dispersion cm3/: 3.50
 pressure, bar : 172...175
Test inj. tubing : 1 680 740 014
                                                                  1000H.: (6.00)
                                                     HIGHEST RATED SPEED
Outside diameter
x Wall thickness
                                                     1st version
                  : 6.00x2.00x600
                                                     Control-lever
x Length mm
                                                     position degrees: 52...60
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                     Testing:
                                                     1st c-rod trav.mm : 10.80
                                                       Speed 1/min: 1190...1200
    per values ____
                                                     2nd c-rod trav.mm : 4.50
                                                                 1/min : 1255...1285
START OF DELIVERY
                                                       Speed
                                                     3rd c-rod trav.mm : 0.00...1.00
Test pressure, bar: 30...32
                                                                1/min : 1350
                                                       Speed
                   : 3.10...3.20
Prestroke mm
                                                    LOWEST RATED SPEED I
                   : (3.05...3.25)
Contr.-rod trav.mm: 9.00...12.00
                                                     Control-lever
A18
```

position degrees: 14...22 Setting point w/out aux. spring 1/min : 450 Speed Contr.-rod trav.mm: 7.6...7.7 Testing: 1/min : 100 Speed C-rod trav.mm min : 9.10 Speed 1/min: 450 C-rod trav.mm : 7.6...7.7 CONSTANT REGULATION 1/min : 470...570 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1150 C-rod trav.mm : 11.80...11.90 2nd speed 1/min: 875 C-rod trav.mm : 13.10...13.20 3rd speed 1/min : 1050 C-rod trav.mm : 12.10...12.40 SWITCH-OVER POINT Speed 1/min : 370 (390) FUEL-DELIVERY CHARACTERISTICS 1/min : 875 Speed Del.quantity cm3/: 101.0...103.0 1000H.: (99.0...105.0) Dispersion cm3/: 5.00 1000H.: (7.00)

```
: 1- 8- 7- 2- 6- 5-
4- 3
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                        Cam sequence
Note inst. in remarks column
Test sheet
Edition
Superceeded
                    : KHD 13,4 D6
                                                        SD ang. spacing<sup>0</sup>CS: 0-45-90-135-180-225-
                    : 12.09.86
                                                                               270-315
                                                        Tolerance + - 0
Calibrating oil : ISO-4113
                                                                             : 0.50 (0.75)
Combination no. : 0 403 548 016
                                                        BASIC SETTING
Injection pump
                                                        1st speed
                                                                     1/mi: 1100
Pump designation : PE8MW100/720LS1118
                                                        Contr.-rod trav.mm: 11.70...11.80
EP type number : 0 413 508 102
Governor
Governor design. : RQ300...1100MW71
                                                        Del.quantity cm3/: 10.3...10.5
                  : 0 420 082 021
Governer no.
                                                                       100H.: (10.1...10.7)
Customer-spec. information
Customer
                    : KHD
                                                        Dispersion
                                                                      cm3/: 0.35
                    : BF8L513
                                                                       100H.: (0.6)
Engine
                                                        2nd speed 1/min: 300.0
Contr.-rod trav. m: 8.0...8.1
Del.quantity cm3/: 1.3...1.7
1st version kW : 172.0
              1/min: 2200
Speed
TEST BENCH REQUIREMENTS
                                                                       100H.: (1.1...1.9)
                                                                       cm3/: 0.35
                                                        Dispersion
Calibrating-oil inlet temp. OC
                                                                       100H.: (0.5)
                    : 38...42
                                                        (B) Setting of injection pump with
Overflow valve
                                                            externally-mounted governor
                    : 1 417 413 000
                                                        SLEEVE TRAVELS
                                                        1st speed 1/min: 1150
Inlet press., bar: 1.50
                                                          Sleeve travel mm: 6.40...6.60
                                                       2nd speed 1/min: 1200
Sleeve travel mm: 9.50...10.40
3rd speed 1/min: 800
Sleeve travel mm: 5.80...6.20
4th speed 1/min: 300
Calibrating nozzle-holder
                 : 0 681 343 009
 assembly
Opening
 pressure, bar : 172...175
                                                          Sleeve travel mm: 1.70...2.50
Test inj. tubing : 1 680 740 014
                                                        SLEEVE POSITION
                                                        Control-lever position
                                                                     Degree: -2
1/min: 650
Outside diameter
x Wall thickness
                                                        Speed
x Length mm : 6.00x2.00x600
                                                        Cont.-rod travelmm: 19.20...20.80
                                                        FULL-LOAD DELIV. AT FULL-LOAD STOP
(A) Injection pump setting values
    Insp. values in parentheses
    Set constant delivery quant.
                                                        1st version
                                                                      1/min: 1100
    per values ____
                                                        Speed
                                                       Del.quantity cm3/: 103.0...105.0
1000H.: (101.0...107.0)
Dispersion cm3/: 3.50
1000H.: (6.00)
START OF DELIVERY
Test pressure, bar: 30...32
                    : 3.10...3.20
Prestroke mm
                    : (3.05...3.25)
                                                       HIGHEST RATED SPEED
Contr.-rod trav.mm: 9.00...12.00
                                                        1st version
A20
```

Control-lever position degrees: 27...35 Setting point: 1/min : 650 Speed Contr.-rod trav.mm: 20.0 Testing: 1st c-rod trav.mm : 10.70 Speed 1/min: 1140...1150
2nd c-rod trav.mm: 4.00
Speed 1/min: 1185...1215
3rd c-rod trav.mm: 0.00...1.00 Speed 1/min : 1300 LOWEST RATED SPEED I Control-lever position degrees: 10...18 Setting point w/out aux. spring Speed 1/min: 300 Contr.-rod trav.mm: 8.0...8.1 Testing: Speed 1/min : 100 C-rod trav.mm min: 8.00 CONSTANT REGULATION 1/min : 330...400 Speed SWITCH-OVER POINT Speed 1/min : 220 (250)

```
: 1-8-7-2-6-5-
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                    Cam sequence
Note inst. in remarks column
Test sheet
                   : KHD 12.7 T5
                                                    SD ang. spacing CS: 0-45-90-135-180-225-
                  : 24.11.86
Edition
Superceeded
                  : 12.09.86
                                                                          270-315
                                                    Tolerance + - 0
                 : ISO-4113
Calibrating oil
                                                                        : 0.50 (0.75)
                  : 0 403 548 017
                                                    BASIC SETTING
Combination no.
Injection pump
                                                                   1/mi: 1150
                                                    1st speed
Pump designation : PE8MW100/720LS1117
EP type number
                 : 0 413 508 101
                                                    Contr.-rod trav.mm: 11.50...11.60
Governor
Governor design. : RQ300...1150MW61-1
                                                    Del.quantity cm3/: 10.5...10.7
Governer no.
                  : 0 420 082 022
                                                                  100H.: (10.3...10.9)
Customer-spec. information
                                                                  cm3/: 0.35
Customer
                   : KHD
                                                    Dispersion
                                                                  100H.: (0.6)
Engine
                   : F 8L 513
                                                    2nd speed 1/min: 300.0
Contr.-rod trav. m: 8.0...8.1
1st version kW : 188.0
             1/min: 2300
Speed
                                                    Del.quantity cm3/: 1.1...1.5
                                                                  100H.: (0.9...1.7)
cm3/: 0.35
100H.: (0.5)
TEST BENCH REQUIREMENTS
                                                    Dispersion
Calibrating-oil inlet temp. OC
                   : 38...42
                                                    SLEEVE POSITION
                                                    Control-lever position
Overflow valve
                   : 1 417 413 000
                                                                 Degree: -2
                                                                  17min: 650
                                                    Speed
                                                    Cont.-rod travelmm: 19.20...20.80
Inlet press., bar: 1.50
                                                    FULL-LOAD DELIV. AT FULL-LOAD STOP
Calibrating nozzle-holder
               : 0 681 343 009
 assembly
                                                    1st version
                                                                  1/min: 1150
Opening
                                                    Speed
                                                    Del.quantity cm3/: 105.0...107.0
1000H.: (103.0...109.0)
Dispersion cm3/: 3.50
pressure, bar : 172...175
Test inj. tubing : 1 680 740 014
                                                                 1000H.: (6.00)
                                                    HIGHEST RATED SPEED
Outside diameter
x Wall thickness
                                                    1st version
                 : 6.00X2.00X600
                                                    Control-lever
x Length mm
                                                     position degrees: 30...38
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                    Setting point:
                                                    Speed 1/min : 650
                                                    Contr.-rod trav.mm: 20.0
    per values ____
START OF DELIVERY
                                                    Testing:
Test pressure, bar: 30...32
                                                    1st c-rod trav.mm : 10.50
                                                                1/min : 1190...1200
                                                    2nd c-rod travamm : 4.50
                   : 3.10...3.20
Prestroke mm
: (3.05...3.25)
Contr.-rod trav.mm: 9.00...12.00
                                                                1/min : 1265...1295
                                                      Speed
                                                    3rd c-rod trav.mm : 0.00...1.00
```

Speed 1/min : 1350 LOWEST RATED SPEED I Control-lever position degrees: 10...18 setting point w/out aux. spring Speed 1/min: 300 Contr.-rod trav.mm: 8.0...8.1 Testing: 1/min : 100 Speed C-rod trav.mm min : 9.50 Speed 1/min : 300 : 8.0...8.1 C-rod trav.mm TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1150 C-rod trav.mm : 11.50...11.60 2nd speed 1/min: 650 C-rod trav.mm : 12.60...12.70 3rd speed 1/min: 900 C-rod trav.mm : 12.00...12.30 SWITCH-OVER POINT 1/min : 220 (250) Speed FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 650 Del.quantity cm3/: 114.0...116.0 1000H.: (112.0...118.0) cm3/: 5.00 Dispersion 1000H.: (7.00)

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
                   : MTU 63,3 A
Test sheet
                   : 1.87
Edition
Superceeded
Calibrating oil : ISO-4113
                   : 0 406 008 032
Combination no.
Injection pump
Pump designation : PE8ZWM160/400RS2015
                   : 0 406 008 032
EP type number
Governor
Governor design.
Governer no.
Customer-spec. information
Customer
                  : MTU
                   : 16 V 396-03
Engine
1st version kW : 1920
             1/min: -
Speed
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                   : 40...45
Overflow valve
                   : 1 417 413 025
Inlet press., bar : 1.50
Calibrating nozzle-holder
 assembly
                  : 1 688 901 026
Opening
pressure, bar : 220...223
Test inj. tubing : 1 680 750 016
Outside diameter
x Wall thickness
                  : 8,00x2,00x1500
x Length mm
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
    per values ____
START OF DELIVERY
Prestroke mm
                   : 2.50...2.60
                   : (-)
Contr.-rod trav.mm: 15.0
Cam sequence : 8-4-5-6-3-1-2-7
```

```
SD ang. spacing ^{\circ} CS: 0-45-90-135-180-225-
                                 270-315
Tolerance + - 0
                              : 0.5(0.75)
BASIC SETTING
                       1/mi: 1000
1st speed
Contr.-rod trav.mm: 18.00
Del.quantity cm3/: 63.0...64.4
                     100H.: (62.5...64.9)
Dispersion
                     cm3/:2.0
                     100H.: (3.0)
2nd speed 1/min: 1000

Contr.-rod trav. m: 9.00

Del.quantity cm3/: 21.2...24.0

100H.: (20.7...24.5)

Dispersion cm3/: 2.8

100H.: (4.2)
                     1/min: 350
3rd speed
Contr.-rod trav.mm: 9.00
Del.quantity cm3/: 13.2...15.6
100H.: (12.7...16.1
Dispersion cm3/: 1.6
100H.: (2.4)
```

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A24

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : CUM 8,3 A : 10.86 Edition

Superceeded

Calibrating oil : ISO-4113

Combination no. : 9 400 083 449

Injection pump

: PES6A100D320/3RS2691 Pump designation

EP type number : 9 410 230 025

Governor

: RSV400...1100A2C2209 Governor design.

: 9 420 083 201 Governer no.

Customer-spec. information : CUMMINS Customer

: 6 CT 8,3 L Engine

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. OC : 38...42

Overflow valve

: 1 417 413 047

Inlet press., bar : 1.0

Calibrating nozzle-holder

: 0 681 343 009 assembly

Opening pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter x Wall thickness

: 6,00X2,00X600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values _____

START OF DELIVERY

Test pressure, bar: 25...27

: 2.80...2.90 Prestroke mm : (2.75...2.95)

Contr.-rod trav.mm: 9.0...12.0 Cam sequence : 1-5-3-6-2-4

SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0.50(0.75) SD mark cyl. no. : 1 START OF DELIVERY DIFFERENCE betw.c-rod trav.mm: 9.00...12.00 & c-rod trav max.: 21.00 Difference CS: 3...4 BASIC SETTING 1st speed 1/mi: 1100 Contr.-rod trav.mm: 10.30...10.40 Del.quantity cm3/: 9.0...9.2 100H.: (8.8...9.4) Dispersion cm3/: 0.35100H.: (0.60) 2nd speed 1/min: 400 Contr.-rod trav. m: 5.90...6.10 Del.quantity cm3/: 1.65...2.05 100H.: (1.40...2.30) Dispersion cm3/: 0.35 100H.: (0.55) SLEEVE POSITION Control-lever position Degree: 3 Speed 17min: 800 Cont.-rod travelmm: 0.30...0.70 Governor-spring reload Notch setting x : 3,75 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version 1/min: 1100 Speed Del.quantity cm3/: 90.0...92.0 1000H.: (88.0...94.0) cm3/: 3.50 Dispersion 1000H.: (6.00) HIGHEST RATED SPEED 1st version Control-lever position degrees: 35...43 Testing: 1st c-rod trav.mm: 9.30 1/min : 1140...1150 Speed

2nd c-rod trav.mm : 4.00 Speed 1/min : 1170...1200 4th speed 1/min : 1300 C-rod trav.mm : 0.30...1.40 LOWEST RATED SPEED I Control-lever position degrees: 16...24 Setting point w/out aux. spring Speed 1/min: 400 Contr.-rod trav.mm: 5.50 Testing: 1/min : 100 Speed C-rod trav.mm min: 19.0 Speed 1/min: 400 C-rod trav.mm : 5.90...6.10 C-rod trav.mm : 2.00 1/min : 570...6.10 Speed TORQUE CONTROL Torque-control curve - 1st version 1/min : 1100 1st speed C-rod tray.mm : 10.30...10.40 2nd speed 1/min: 500 C-rod trav.mm: 10.30...10.50 3rd speed 1/min: 400 C-rod tray.mm : 10.70...11.20 FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 500 Del.quantity cm3/: 74.0...77.0

1000H.: (71.5...79.5)

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                       SD ang. spacing ^{\circ} CS: 0-60-120-180-240-300 Tclerance + - ^{\circ} : 0.5(0.75)
Note inst. in remarks column
                    : CUM 8,3 A 1
Test sheet
Edition
                    : 14.11.86
                                                       SD mark cyl. no. : 1
Superceeded
                    : ISO-4113
                                                       START OF DELIVERY DIFFERENCE
Calibrating oil
Combination no.
                    : 9 400 083 450
                                                       betw.c-rod trav.mm: 9.00...12.00
                                                       & c-rod tray max. : 21.00
Difference CS : 3...4
Injection pump
Pump designation
                    : PES6A100D320/3RS2691
EP type number
                    : 9 410 230 025
                                                       BASIC SETTING
Governor
                    : RSV375...1150A2C2210
                                                                       1/mi: 1150
Governor design.
                                                       1st speed
                    : 9 420 083 202
                                                       Contr.-rod trav.mm: 11.10...11.20
Governer no.
                                                       Del.quantity cm3/ : 9.7...9.9
Customer-spec. information
Customer
                    : CUMMINS
                                                                      100H.: (9.5...10.1)
Engine
                    : 6 C 8,3 L
                                                       Dispersion
                                                                      cm3/: 0.35
TEST BENCH REQUIREMENTS
                                                                      100H.: (0.6)
Calibrating-oil inlet temp. OC
                                                       2nd speed 1/min: 375

Contr.-rod trav. m: 5.90...6.10

Del.quantity cm3/: 1.45...1.85

100H.: (1.20...2.10)

Dispersion cm3/: 0.35
                    : 38...42
Overflow valve
                    : 1 417 413 047
                                                                      100H.: (0.55)
Inlet press., bar : 1.00
                                                       SLEEVE POSITION
Calibrating nozzle-holder
                 : 0 681 343 009
                                                       Control-lever position
 assembly
                                                                     Degree: -3
                                                                      17min: 800
Opening
                                                       Speed
pressure, bar : 172...175
                                                       Cont.-rod travelmm: 0.30...0.70
                                                       Governor-spring reload
Test inj. tubing : 1 680 750 014
                                                       Notch setting x : 3.25
                                                       FULL-LOAD DELIV. AT FULL-LOAD STOP
Outside diameter
x Wall thickness
                   : 6,00x2,00x600
x Length mm
                                                       1st version
                                                       Speed
                                                                      1/min: 1150
                                                       Del.quantity cm3/: 97.0...99.0
1000H.: (95.0...101.0)
(A) Injection pump setting values
    Insp. values in parentheses
                                                                    cm3/ : 3.5
    Set constant delivery quant.
                                                       Dispersion
                                                                     1000H.: (6.0)
    per values ____
                                                       HIGHEST RATED SPEED
START OF DELIVERY
                                                       1st version
Test pressure, bar: 25...27
                                                       Control-lever
                    : 2.80...2.90
                                                        position degrees: 42...50
Prestroke mm
                    : (2.75...2.95)
Contr.~rod trav.mm: 9.00...12.00
                                                       Testing:
Cam sequence : 1-5-3-6-2-4
                                                       1st c-rod trav.mm: 10.10
                                                         Speed 1/min: 1190...1200
```

2nd c-rod trav.mm : 4.00 Speed 1/min: 1240...1270 4th speed 1/min: 1400 C-rod trav.mm : 0.30...1.40 LOWEST RATED SPEED I Control-lever position degrees: 17...25 Setting point w/out aux. spring Speed 1/min: 375 Contr.-rod trav.mm: 5.50 Testing: 1/min : 100 Speed C-rod trav.mm min : 19.00 1/min : 375 Speed C-rod trav.mm : 5.90...6.10 C-rod trav.mm : 2.00 Speed 1/min : 570...630 TORQUE CONTROL Torque-control curve - 1st version 1/min : 1150 1st speed C-rod trav.mm : 11.10...11.20 2nd speed 1/min: 500 C-rod trav.mm : 11.90...12.00 3rd speed 1/min : 800 C-rod trav.mm : 11.40...11.70 FUEL-DELIVERY CHARACTERISTICS 1/min : 500 Speed Del.quantity cm3/: 96.0...99.0 1000H:: (93.5...101.5) Speed 1/min: 800 Del.quantity cm3/: 100.0...103.0 1000H:: (97.5...105.5) Remarks:

: MULLER : VALMET : MASSEY يسا

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                        Contr.-rod trav.mm: 9.00...12.0
                                                        Cam sequence : 1-5-3-6-2-4
Note inst. in remarks column
                     : CUM 8,3 B 1
Test sheet
                                                        SD ang. spacing ^{0}CS: 0-60-120-180-240-300 Tolerance + - ^{0}: 0.50(0.75)
                     : 10.86
Edition
Superceeded
Calibrating oil : ISO-4113
                                                        SD mark cyl. no. : 1
                    : 9 400 083 451
Combination no.
                                                        START OF DELIVERY DIFFERENCE
Injection pump
                                                        betw.c-rod trav.mm: 9.00...12.00 & c-rod trav max. : 21.0 Difference CS : 3...4
Pump designation : PES6A100D320/3RS2691
                    : 9 410 230 028
EP type number
Governor
Governor design. : RQV350...1100AB1218R
                                                        BASIC SETTING
Governer no.
                    : 9 420 080 214
                                                        1st speed 1/mi: 1000
Customer-spec. information
                    : CUMMINS
                                                        Contr.-rod trav.mm: 12.8...12.9
Customer
Engine
                     : 6 CT/8,3 L
                                                        Del.quantity cm3/: 11.9...12.1
1st version kW : 154.6
                                                                       100H.: (11.7...12.3)
Speed
               1/min: 2200
                                                        Dispersion
                                                                       cm3/: 0.35
TEST BENCH REQUIREMENTS
                                                                       1064.: (0.60)
Calibrating-oil inlet temp. °C
                                                        2nd speed 1/min: 350
Contr.-rod trav. m: 5.90...6.10
                     : 38...42
                                                        Del.quantity cm3/: 1.30...1.70
Overflow valve
                                                                       100H.: (1.05...1.95)
cm3/: 0.35
                     : 1 417 413 047
                                                        Dispersion
                                                                       100H.: (0.55)
Inlet press., bar: 1.0
                                                         (B) Setting of injection pump with
Calibrating nozzle-holder
           : 0 681 343 009
                                                             externally-mounted governor
 assembly
                                                        SLEEVE TRAVELS
Opening
 pressure, bar : 172...175
                                                        1st speed 1/min: 350
                                                           Sleeve travel mm: 2.2...2.6
                                                        2nd speed 1/min: 500
Sleeve travel mm: 3.6...3.9
3rd speed 1/min: 800
Sleeve travel mm: 5.3...5.6
4th speed 1/min: 1150
Test inj. tubing : 1 680 750 014
Outside diameter
x Wall thickness
                                                           Sleeve travel mm: 8.5...8.6
                     : 6,00x2,00x600
x Length mm
                                                        SLEEVE POSITION
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                        Control-lever position
                                                        Degree: 1
Speed 1/min: 1140
Cont.-rod travelmm: 15.2...17.8
    per values ____
START OF DELIVERY
                                                        FULL-LOAD DELIV. AT FULL-LOAD STOP
Test pressure, bar: 25...27
                    : 2.80...2.90
                                                        1st version
Prestroke mm
                     : (2.75...2.95)
                                                                       1/min: 1000
                                                        Speed
B02
```

1000H.: (6,00) HIGHEST RATED SPEED 1st version Control-lever position degrees: 59...67 Testing: 1st c-rod trav.mm : 11.80 1/min : 1140...1150 Speed 2nd c-rod trav.mm : 4.00 1/min : 1240...1270 Speed 1/min : 1370 4th speed C-rod trav.mm : 0...1.0 LOWEST RATED SPEED I Control-lever position degrees: 11...19 Testing: Speed 1/min : 100 C-rod trav.mm min : 9.00 1/min : 350 Speed : 5.90...6.10 : 2.00 C-rod trav.mm C-rod trav.mm 1/min: 630...690 Speed CONSTANT REGULATION 1/min : 350...500 Speed TORQUE CONTROL Dimension a mm : 0.70 Torque-control curve - 1st version 1/min : 1000 1st speed C-rod trav.mm : 12.80...12.90 $1/\min : 700$ 2nd speed C-rod trav.mm : 13.50...13.60 3rd speed 1/min : 900 C-rod trav.mm : 13.30...13.50 4th speed 1/min: 850 C-rod trav.mm : 13.10...13.30 compensator (LDA, ADA, ALDA) 1st version Setting 1/min : 500 hPa : 800 Speed Pressure Contr.-rod trav.mm: 13.50...13.60 Measurement 1/min : 500 Speed 1st pressure hPa : -11.4 C-rod trav.mm : 0...11.50

B03

2nd pressure hPa : 575 C-rod trav.mm : 12.90...13.10 3rd pressure hPa : 475 C-rod trav.mm : 12.00...12.20 SWITCH-OVER POINT Speed 1/min : 290(310) FUEL-DELIVERY CHARACTERISTICS

1st version Charge press. hPa : 800 Speed 1/min : 700 Del.quantity cm3/ : 125.5...128.5 1000H.: (123.0...131.0) Charge press. hPa : 800

1/min : 900

Del.quantity cm3/: 128.5...131.5 1000H.: (126.0...134.0) Charge press. hPa: -Speed 1/min: 500 Del.quantity cm3/: 86.0...88.0

1000H.: (84.0...90.0)

Remarks:

Speed

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MWM 5,9 F Edition : 17.11.86

Superceeded

: ISO-4113 Calibrating oil

Combination no. : 9 400 085 264

Injection pump

Pump designation : PES6A90D320RS2733 EP type number : 9 400 084 010

Governor

: RSV350...1250A0B1108 Governor design.

-2R

<u>----</u>

Governer no. : 9 420 083 209

Customer-spec. information Customer

: TD 229-6 Engine

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. OC

: 38...42

Overflow valve

: 1 417 413 046

Inlet press., bar : 1.00

Calibrating nozzle-holder

: 0 681 343 009 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter x Wall thickness

: 6,00XX2,00X600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 2.20...2.30 Prestroke mm : (2.15...2.35) Contr.-rod trav.mm: 9.00...12.00

cam sequence : 1-5-3-6-2-4

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75) SD mark cyl. no. : 1 START OF DELIVERY DIFFERENCE betw.c-rod trav.mm: 9.00...12.00 & c-rod tray max. : 21.00 Difference CS : 4...5 BASIC SETTING 1st speed 1/mi: 1250 Contr.-rod trav.mm: 9.40...9.50 Del.quantity cm3/ : 7.7...7.8 100H.: (7.5...8.0) cm3/:0.30Dispersion 100H.: (0.50) 1/min: 350 2nd speed Contr.-rod trav. m: 6.40...6.60 Del.quantity cm3/: 0.9...1.3 100H.: (0.7...1.5) Dispersion cm3/: 0.25 100H.: (0.45) SLEEVE POSITION Control-lever position Degree: -3 17min: 800 Speed Cont.-rod travelmm: 0.30...1.00 Governor-spring reload Notch setting x : 3.5 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version 1/min: 1250 Speed Del.quantity cm3/: 77.0...78.0 1000H: (75.0...80.0) Dispersion cm3/: 3.0 1000H: (5.0) HIGHEST RATED SPEED 1st version Control-lever position degrees: 50...58 Testing: 1st c-rod trav.mm : 8.40 Speed 1/min : 1290...1300

B05

2nd c-rod trav.mm : 4.00 Speed 1/min : 1330...1360 4th speed 1/min : 1420 C-rod tray.mm : 0.30...1.70 LOWEST RATED SPEED I Control-lever position degrees: 21...29 Setting point w/out aux. spring 1/min : 350 Contr.-rod trav.mm: 6.00 Testing: Speed 1/min: 100 C-rod trav.mm min: 19.0 Speed 1/min: 350 C-rod trav.mm: 6.40...6.60 C-rod trav.mm: 2.00 Speed 1/min: 410...470 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1250 C-rod trav.mm : 9.40...9.50 2nd speed 1/min : 500 C-rod trav.mm : 9.40...9.60 3rd speed 1/min : 400

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 500 Del.quantity cm3/: 56.0...58.0 1000H.: (53.5...60.5)

C-rod trav.mm : 10.70...11.30

Remarks: **APPLICATION**

Combine-harvester

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                         SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300
Tolerance + ~ ° : 0,5(0,75)
Note inst. in remarks column
Test sheet
                     : MWM 5,9 E
Edition
                     : 7.86
                                                         SD mark cyl. no. : 1
Superceeded
                                                         START OF DELIVERY DIFFERENCE
Calibrating oil
                     : ISO-4113
                                                         betw.c-rod trav.mm: 9,0-12,0
Difference °CS : 4,0...5,0
                     : 9 400 085 273
Combination no.
Injection pump
                     : PES6A90D320RS2718
                                                         BASIC SETTING
Pump designation
                     : 9 400 084 003
EP type number
                                                                         1/mi: 1500
                                                         1st speed
Governor
                     : RSV350...1500A0B2207
Governor design.
                                                         Contr.-rod trav.mm: 10,9...11,0
                       -1R
                     : 9 420 083 211
Governer no.
                                                         Del.quantity cm3/: 8,3...8,4
Customer-spec. information
Customer
                                                                        100H.: (8,1...8,6)
                     : TD 229-6
Engine
                                                         Dispersion
                                                                        cm3/:0.3
TEST BENCH REQUIREMENTS
                                                                        100H.: (0,5)
                                                         2nd speed 1/min: 350
Contr.-rod trav. m: 5,9...6,1
Del.quantity cm3/: 1,0...1,4
100H.: (0,8...1,6)
Dispersion cm3/: 0,25
Calibrating-oil inlet temp. °C
                     : 38...42
Overflow valve
                     : 1 417 143 046
                                                                        100H.: (0.45)
Inlet press., bar: 1.0
                                                         SLEEVE POSITION
Calibrating nozzle-holder
                                                         Control-lever position
                    : 0 681 343 009
                                                                       Degree: LOSE
 assembly
                                                                        17min: 800
                                                         Cont.-rod travelmm: 0,3...1.0
Opening
 pressure, bar : 172...175
                                                         Governor-spring reload
                                                         Notch setting x : 3,5
Test inj. tubing
                    : 1 680 750 014
                                                         FULL-LOAD DELIV. AT FULL-LOAD STOP
Outside diameter
x Wall thickness
                                                         1st version
                                                         Speed 1/min: 1500
Del.quantity cm3/: 83,0...84,0
1000H: (81,0...86,0)
Dispersion cm3/: 3,0
x Length mm
                     : 6,00X2,00X600
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                                       1000H.: (5.0)
    per values ____
                                                         HIGHEST RATED SPEED
START OF DELIVERY
                                                         Testing:
Test pressure, bar: 1,0
                                                         1st c-rod trav.mm : 9.9
Speed 1/min : 1540...1550
                     : 2,65...2,75
Prestroke mm
                                                         2nd c-rod trav.mm: 4,0
                     : (2,60...2,80)
Contr.-rod trav.mm: 9,0...12,0
                                                          Speed
                                                                     1/min : 1600...1630
                                                         4th speed 1/min: 1700
Cam sequence : 1-5-3-6-2-4
                                                           C-rod trav.mm : 0,3...1,7
```

B06

```
LOWEST RATED SPEED I
Control-lever
 position degrees: 18...26
Setting point w/out aux. spring
Speed
            1/min : 350
Contr.-rod trav.mm: 5,4...5,6
Testing:
Speed
                 1/min : 100
C-rod trav.mm min: 19,0

Speed 1/min: 350

C-rod trav.mm : 5,9...6,1

C-rod trav.mm : 2,0

Speed 1/min: 430...490
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min: 1500
C-rod trav.mm: 10,9...11,0
2nd speed 1/min: 500
C-rod trav. : 10,9...11,1
3rd speed 1 n : 400
  C-rod trav.mm : 12,1...12,7
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 500
Del.quantity cm3/: 70,0...72,0
1000H:: (67,5...74,5)
```

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75) Note inst. in remarks column Test sheet : MWM 5,9 E : 17.11.86 Edition SD mark cyl. no. : 1 Superceeded : 7.86 Calibrating oil : ISO-4113 START OF DELIVERY DIFFERENCE betw.c-rod trav.mm: 9.00...12.00 & c-rod trav max. : 21.00 Difference CS : 3...4 : 9 400 085 285 Combination no. Injection pump Pump designation : PES6A90D320RS2727 EP type number : 9 400 084 007 BASIC SETTING Governor 1/mi: 1200 Governor design. : RSV350...1250A0B1108 1st speed -3R : 9 420 083 223 Contr.-rod trav.mm: 9.10...9.20 Governer no. Del.quantity cm3/ : 62.5...63.5 Customer-spec. information Customer : MWM 100H.: (60.5...65.5) Engine : D229-6 cm3/:3.0Dispersion TEST BENCH REQUIREMENTS 100H.: (5.0) Calibrating-oil inlet temp. °C 2nd speed 1/min: 350 Contr.-rod trav. m: 5.90...6.10 Del.quantity cm3/: 1.1...1.5 100H.: (0.9...1.7) : 38...42 Overflow valve : 1 417 413 046 cm3/: 0.25Dispersion 100H.: (0.45) Inlet press., bar: 1.0 SLEEVE POSITION Calibrating nozzle-holder : 0 681 343 009 Control-lever position assembly Degree: -3 1/min: 800 Opening Speed pressure, bar : 172...175 Cont.-rod travelmm: 0.30...1.00 Governor-spring reload Notch setting x : 4.0 : 1 680 750 014 Test inj. tubing FULL-LOAD DELIV. AT FULL-LOAD STOP Outside diameter x Wall thickness : 6,00x2,00x600 1st version x Length mm 1/min: 1200 Speed Del.quantity cm3/: 62.5...63.5 (A) Injection pump setting values 1000H.: (60.5...65.5) cm3/: 3.0 Insp. values in parentheses Set constant delivery quant. Dispersion 1000H.: (5.0) per values ____ HIGHEST RATED SPEED START OF DELIVERY Test pressure, bar: 25...27 1st version Control-lever : 2.70...2.80 position degrees: 50...58 Prestroke mm : (2.65...2.85) Contr.-rod trav.mm: 9.00...12.00 Testing: Cam sequence : 1-5-3-6-2-4 1st c-rod trav.mm : 8.10 Speed 1/min: 1240...1250

B08

```
2nd c-rod trav.mm : 4.00
           1/min : 1300...1330
 Speed
4th speed 1/min: 1450
  C-rod trav.mm : 0.30...1.70
LOWEST RATED SPEED I
Control-lever
 position degrees: 25...33
Setting point w/out aux. spring
Speed
           1/min : 350
Contr.-rod trav.mm: 5.50
Testing:
Speed
             1/min : 100
C-rod trav.mm min : 19.00
            1/min : 350
Speed
C-Tod trav.mm : 5.90...6.10
C-rod trav.mm : 2.00
            1/min : 510...570
Speed
TORQUE CONTROL
Torque-control curve - 1st version
           1/min : 1200
1st speed
  C-rod trav.mm : 9.10...9.20
           1/min : 500
2nd speed
  C-rod trav.mm : 9.60...9.70
3rd speed 1/min: 800
  C-rod trav.mm : 9.30...9.60
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 500
Del.quantity cm3/: 52.0...54.0
1000H.: (49.5...56.5)
             1/min : 800
Speed
Del.quantity cm3/: 59.5...61.5
1000H.: (57.0...64.0)
```

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5-3-6-2-4 Note inst. in remarks column Test sheet : MB 5.7 M 11 : 17.11.86 SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75) Edition Superceeded Calibrating oil : IS-4113 SD mark cyl. no. : 1 Combination no. : 9 400 085 290 BASIC SETTING Injection pump Pump designation : PES6A80D410RS2085Y 1/mi: 1300 1st speed EP type number : 0 410 886 044 Contr.-rod trav.mm: 10.40...10.50 Governor : RSV350...1300A2B713-Governor design. Del.quantity cm3/: 6.4...6.5 Governer no. : 9 420 083 226 100H.: (6.25...6.65) Customer-spec. information Customer : DAIMLER-BENZ Dispersion cm3/: 0.25: 0M 352 100H.: (0.4) Engine 2nd speed 1/min: 350 Contr.-rod trav. m: 7.40...7.60 1st version kW : 88.0 1/min: 2600 Speed Del.quantity cm3/: 1.25...1.55 100H.: (1.1...1.7) Dispersion cm3/: 0.2 100H.: (0.35) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC : 38...42 SLEEVE POSITION Control-lever position Overflow valve : 1 417 413 047 Degree: -3 17min: 800 Cont.-rod travelmm: 0.30...1.00 Inlet press., bar: 1.00 Calibrating nozzle-holder Governor-spring reload : 0 681 343 009 Notch setting x : 4.25 assembly FULL-LOAD DELIV. AT FULL-LOAD STOP Opening pressure, bar : 172...175 1st version 1/min: 1300 Speed Del.quantity cm3/: 64.0...65.0 1000H.: (62.5...66.5) Dispersion cm3/: 2.5 1000H.: (4.0) Test inj. tubing : 1 680 750 014 Outside diameter x Wall thickness : 6,00x2,00x600 x Length mm HIGHEST RATED SPEED (A) Injection pump setting values 1st version Insp. values in parentheses Set constant delivery quant. Control-lever position degrees: 44...52 per values ____ Testing: 1st c-rod trav.mm : 9.40 Speed 1/min : 1340...1350 START OF DELIVERY Test pressure, bar: 38...42 2nd c-rod trav.mm : 4.00 Speed 1/min: 1390...1420 4th speed 1/min: 1550 : 2.15...2.25 Prestroke mm : (2.10...2.30) **B10**

```
: 0.30...1.40
  C-rod trav.mm
LOWEST RATED SPEED I
Control-lever
 position degrees: 16...24
Setting point W/out aux. spring
Speed 1/min: 350
Contr.-rod trav.mm: 7.00
Testing:
Speed
                1/min : 100
C-rod trav.mm win: 19.00
                1/min : 350
Speed
                     : 7.40...7.60
: 2.00
C-rod trav.mm
C-rod trav.mm
               1/min : 650...710
Speed
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min: 1300
 C-rod trav.mm : 10.40...10.50
2nd speed 1/min: 500
C-rod trav.mm: 10.70...10.80
3rd speed 1/min: 800
  C-rod trav.mm : 10.50...10.70
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 500
Del.quantity cm3/: 52.0...55.0
1000H.: (50.5...56.5)
Speed 1/min: 800
Del.quantity cm3/: 55.0...58.0
1000H.: (53.5...59.5)
```

```
: 4,25...4,35
: (4,20...4,40)
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                         Prestroke mm
                                                         Contr.-rod trav.mm: 9,00-12,00
Note inst. in remarks column
                                                                             : 1-5-3-6-2-4
                                                         Cam sequence
Test sheet
                     : FOR 7,8 A
Edition
                     : 15.12.86
Superceeded
                     : 10.85
                                                         SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75)
                   : ISO-4113
Calibrating oil
Combination no.
                    : 9 400 087 335
                                                         SD mark cyl. no. : 1
Injection pump
Pump designation
                     : PES6P110A720RS3150
                                                         START OF DELIVERY DIFFERENCE
EP type number
                     : 9 400 087 046
                                                         betw.c-rod trav.mm: 9,0...12,0
Governor
Governor design. : RQV350...1300PA776
Governer no. : 9 420 080 210
                                                         & c-rod tray max. : 21
Difference CS : 2,0...3,0
Customer-spec. information
                                                         BASIC SETTING
                     : FORD (FTO)
Customer
                                                                     1/mi: 1300
                                                         1st speed
                     : 7.8 L - TC
Engine
                                                         Contr.-rod trav.mm: 13,6...13,7
1st version kW : 176.6
Speed
               1/min: 2600
                                                         Del.quantity cm3/: 13,9...14,1
TEST BENCH REQUIREMENTS
                                                                        100H.: (13,7...14,3)
Calibrating-oil inlet temp. °C
                                                                        cm3/:0.5
                                                         Dispersion
                     : 38...42
                                                                        100H.: (0,9)
Overflow valve
                                                         2nd speed 1/min: 350

Contr.-rod trav. m: 7,4...7,6

Del.quantity cm3/: 1,5...1,9

100H.: (1,25...2,15)

Dispersion cm3/: 0,35
                     : 1 417 413 025
Inlet press., bar : 1.5
Calibrating nozzle-holder
                                                                        100H.: (0,55)
 assembly
                  : 1 688 901 017
Opening
                                                         (B) Setting of injection pump with
                     : 207...210
                                                              externally-mounted governor
 pressure, bar
                                                         SLEEVE TRAVELS
Perforated-plate
                                                         1st speed; 1/min: 350
Sleeve travel mm: 0,6...1,3
                     : 0,6
 diameter mm
                                                         2nd speed 1/min: 500
Sleeve travel mm: 2,3...2,7
Test inj. tubing : 1 680 750 015
                                                         3rd speed 1/min: 800
                                                           Sleeve travel mm: 4,0...4,3
Outside diameter
                                                         4th speed 1/min: 1000
x Wall thickness
                                                         Steeve travel mm: 5,0...5,3
5th speed 1/min: 1300
Steeve travel mm: 7,2...7,3
                     : 6,00x1,50x600
x Length mm
(A) Injection pump setting values
    Insp. values in parentheses
    Set constant delivery quant.
                                                         SLEEVE POSITION
    per values ____
                                                         Control-lever position
                                                                       Degree: MAX.
                                                                        17min: 1350
START OF DELIVERY
                                                         Speed
                                                         Cont.-rod travelmm: 15,2...17,8
Test pressure, bar: 25...27
```

```
FULL-LOAD DELIV. AT FULL-LOAD STOP
1st version
Speed
              1/min: 1300
Charge press. hPa : 600
Del.quantity cm3/: 139.0...141.0
1000H.: (137,0...143,0)
            cm3/ : 5.0
Dispersion
             1000H.: (9.0)
HIGHEST RATED SPEED
1st version
Control-lever
 position degrees: 61...69
Testing:
1st c-rod trav.mm : 12,6
            1/min : 1360...1370
  Speed
2nd c-rod trav.mm : 4.0
Speed 1/min : 1500...1530
4th speed 1/min : 1620
  C-rod trav.mm : 0...1.0
LOWEST RATED SPEED I
Control-lever
 position degrees: 11...19
Testing:
Speed
             1/min : 100
C-rod trav.mm min: 9.0
Speed 1/min: 350
                : 7,4...7,6
C-rod trav.mm
                   : 2,0
C-rod trav.mm
Speed
             1/min : 020...680
CONSTANT REGULATION
             1/min : 370...440
Speed
TORQUE CONTROL
Dimension a mm
Torque-control curve - 1st version
1st speed
            1/min : 1300
  C-rod trav.mm : 13,6...13,7
            1/min : 800
2nd speed
                  : 14,2...14,3
  C-rod trav.mm
            1/min : 1000
3rd speed
                 : 14,05...14,15
  C-rod trav.mm
           1/min : 1050
4th speed
  C-rod trav.mm
                   : 13,75...13,95
 compensator (LDA,ADA,ALDA)
1st version
Setting
             1/min : 500
Speed
            hPa
                  : 600
Pressure
Contr.-rod trav.mm: 14,2...14.3
Measurement
```

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1/min : 500 Speed 1st pressure hPa : 13,5...13,6 : 420 C-rod trav.mm 2nd pressure hPa C-rod trav.mm : 13,7...13,8 3rd pressure hPa : 475 : 13,9...14,1 C-rod trav.mm SWITCH-OVER POINT 1/min : 290(310) Speed FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 600 1/min: 800 Speed Del.quantity cm3/: 125.0...129.0 1000H.: (123.0...131.0) cm3/ : Dispersion 1000H.: Charge press. hPa: 600 Speed 1/min : 1000 Del.quantity cm3/: 135,0...139,00 1000H.: (133,0...141,0) Dispersion cm3/:-1000H.: Charge press. hPa : Speed 1/min: 500 Del.quantity cm3/: 99.0...101.0 1000H.: (96.0...104.0) cm3/ : Dispersion 1000H.: -

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet : FOR 7 Edition : 15.12 Superceeded : 6.86 : FOR 7,8 A 2 : 15.12.86 Calibrating oil : ISO-4113 : 9 400 087 336 Combination no. Injection pump Pump designation : PES6P110A720RS3150 EP type number : 9 400 087 336 Governor Governor design. : RQV350...1300PA776-2 Governer no. : 9 420 080 213 Customer-spec. information : FORD (FTO) Customer : 7,8 L-TC Ingine 1st version kW : 154.6 1/min: 2600 Speed TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C : 38...42 Overflow valve : 1 417 413 025 Inlet press., bar: 1.5 Calibrating nozzle-holder : 1 688 901 017 assembly Opening : 207...210 pressure, bar Perforated-plate diameter mm : 0,6 Test inj. tubing : 1 680 750 015 Outside diameter x Wall thickness : 6,00x1,50x600 x Length mm (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 4,25...4,35 : (4,20...4,40) Contr.-rod trav.mm: 9,0...12,0 Cam sequence : 1-5-3-6-2-4 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Speed 1/min: 1300 Charge press. hPa: 550
Del.quantity cm3/: 126,0...128,0
1000H.: (124,0...130,0) SD ang. spacing 0 CS: 0-60-120-180-24-0300 Tolerance + - 0 : 0,5(0,75) cm3/ : 5,0Dispersion 1000H.: (9,0) SD mark cyl. no. : 1 HIGHEST RATED SPEED 1st version START OF DELIVERY DIFFERENCE Control-lever position degrees: 58...66 betw.c-rod trav.mm: 9,0...12,0 & c-rod trav max. : 21.0 Difference CS : 2.0...3.0 Testing: 1st c-rod trav.mm : 11,3 1/min : 1360...1370 Speed BASIC SETTING 2nd c-rod trav.mm : 4.0 1/min : 1470...1500 1/min : 1620 Speed 1/mi: 1300 1st speed 4th speed C-rod trav.mm : 0...1.0 Contr.-rod trav.mm: 12,3...12,4 LOWEST RATED SPEED I Del.quantity cm3/: 12,6...12,8 Control-lever position degrees: 12...20 100H.: (12,4...13,0) Testing: 1/min: 100 Dispersion cm3/:0.5Speed C-rod trav.mm min : 9.5

Speed 1/min : 350

C-rod trav.mm : 7.6...7.8

C-rod trav.mm : 2.0 100H.: (0,9) nm : 2,0 1/min : 590...650 C-rod trav.mm 2nd speed 1/min: 350 Contr.-rod trav. m: 7,6...7,8

Del.quantity cm3/: 2,3...2,7

100H.: (2,05...2,95)

Dispersion cm3/: 0,35

100H.: (0,55) Speed CONSTANT REGULATION 1/min : 370...440 Speed TORQUE CONTROL (B) Setting of injection pump with Dimension a mm : ? Torque-control curve - 1st version externally-mounted governor 1/min : 1300 1st speed G-rod trav.mm : 12,3...12,4 SLEEVE TRAVELS 1st speed 1/min: 350 2nd speed 1/min: 800 C-rod trav.mm : 12.6....12,7 3rd speed 1/min : 1050 Sleeve travel mm: 0,6...1,3 2nd speed 1/min: 500 Sleeve travel mm: 2,3...2,7 C-rod trav.mm : 12,45...12,55 4th speed 1/min : 1000 3rd speed 1/min: 800 Sleeve travel mm: 4,0...4,3 C-rod trav.mm : 12,5...12,7 4th speed 1/min: 1000 Sleeve travel mm: 5_0...5,3 compensator (LDA, ADA, ALDA) 5th speed 1/min: 1700 Sleeve travel mm: 7,2...7,3 1st version SLEEVE POSITION Setting Control-lever position 1/min : 500 Speed Degree: MAX. Pressure hPa : 550 17min: 1350 Contr.-rod trav.mm: 12,6...12,7 Cont.-rod travelmm: 15,2...17,8 Measurement

```
1/min : 500
Speed
1st pressure hPa
                    : 12,3...12,4
: 420
  C-rod trav.mm
2nd pressure hPa
  C-rod trav.mm
                    : 12,4...12,5
3rd pressure hPa
                   : 370
  C-rod trav.mm
                     4 م 3 . . . 12 م 12
SWITCH-OVER POINT
             1/min : 290(310)
Speed
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 550
             1/min : 800
Speed
Del.quantity cm3/: 105.0...109.0
              1000H.: (103.0...111.0)
              cm3/: -
Dispersion
              1000H.: -
Charge press. hPa : 550
Speed 1/min : 1000
Del.quantity cm3/: 118,0...122,0
             1000H.: (116,0...124,0)
Dispersion
              cm3/:-
              1000H.: -
Charge press. hPa : -
Speed 1/min: 500
Del.quantity cm3/: 77,0...79,0
1000H:: (74,0...82,0)
              cm3/:-
Dispersion
             1000H.: -
```

Note inst. in remarks column

Test sheet : FOR 7,8 A 1
Edition : 15.12.86
Superceeded : 12.85
Calibrating oil : ISO-4113

Combination no. : 9 400 087 337

Injection pump

Pump designation : PES6P110A720RS3150 : 9 400 087 046 EP type number

Governor

Governor design. : RQV350...1300PA776-1 Governer no. : 9 420 080 212

Customer-spec. information Customer : FORD (FTO)

: 7,8 L-TC Engine

1st version kW : 136.2 Speed 1/min: 2600

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. OC

: 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar: 1.5

Calibrating nozzle-holder

: 1 688 901 017 assembly

Opening

pressure, bar : 207...210

Perforated-plate

diameter mm : 0,6

Test inj. tubing : 1 680 750 015

Outside diameter

x Wall thickness

x Length mm : 6,00x1,50x600

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

FULL-LOAD DELIV. AT FULL-LOAD STOP Prestroke mm : 4,25...4,35 : (4,20...4,40) Contr.-rod trav.mm: 9,0...12,0 Cam sequence : 1-5-3-6-2-4 1st version 1/min: 1300 Speed Charge press. hPa: 600
Del.quantity cm3/: 123.0...125.0
1000H.: (121.0...127.0)
Dispersion cm3/: 5.0
1000H.: (9.0) SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) HIGHEST RATED SPEED SD mark cyl. no. : 1 1st version START OF DELIVERY DIFFERENCE Control-lever position degrees: 58...66 betw.c-rod trav.mm: 9,0...12,0 & c-rod trav max. : 21,0 Difference CS : 2,0...3,0 Testing: 1st c-rod trav.mm : 11,0 Speed 1/min: 1360...1370 2nd c-rod trav.mm: 4,0 BASIC SETTING Speed 1/min: 1470...1500 4th speed 1/min: 1600 1st speed 1/mi: 1300 C-rod trav.mm : 0...1.0 Contr.-rod trav.mm: 12,0...12,1 LOWEST RATED SPEED I Del.quantity cm3/: 12,3...12,5 Control-lever position degrees: 11...19 100H.: (12,1...12,7) Testing: Dispersion cm3/:0.5Speed 1/min : 100 C-rod trav.mm min: 9,5 Speed 1/min: 350 C-rod trav.mm: 7,4...7,6 C-rod trav.mm: 2,0 Speed 1/min: 630...690 100H.: (0,9) 2nd speed 1/min: 3500 Contr.-rod trav. m: 7,4...7,6 Del.quantity cm3/: 2,1...2,5 100H.: (1,85...2,75) Dispersion cm3/: 0,35 CONSTANT REGULATION 1/min: 370...440 Speed 100K.: (0,55) TORQUE CONTROL (B) Setting of injection pump with Dimension a mm : ? Torque-control curve - 1st version externally-mounted governor 1st speed 1/min : 1300 C-rod trav.mm : 12,0...12,1 2nd speed 1/min : 800 SLEEVE TRAVELS 1st speed 1/min: 350
Sleeve travel mm: 0,6...1,3
2nd speed 1/min: 500
Sleeve travel mm: 2,3...2,7
3rd speed 1/min: 800 C-rod trav.mm : 12,3...12,4 3rd speed 1/min : 900 C-rod trav.mm : 12,3...12,4 4th speed 1/min: 1015 Sleeve travel mm: 4,0...4,3 C-rod trav.mm 25, 12, 15, . . . 12, 25 4th speed 1/min: 1000
Sleeve travel mm: 5,0...5,3
5th speed 1/min: 1300
Sleeve travel mm: 7,2...7,3 compensator (LDA, ADA, ALDA) 1st version SLEEVE POSITION Setting Control-lever position 1/min : 500 Speed Degree: MAX. Pressure hPa : 600 17min: 1350 Contr.-rod trav.mm: 12,3...12,4 Speed Cont.-rod travelmm: 15,2...17,8 Measurement

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```
1/min : 500
Speed
1st pressure hPa
  C-rod trav.mm
                     : 11,3...11,4
: 245
2nd pressure hPa
C-rod trav.mm : 11,6...11,7
3rd pressure hPa : 335
  C-rod trav.mm
                     : 12,0...12,2
SWITCH-OVER POINT
              1/min : 290 (310)
Speed
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa: 600
Speed
              1/min : 800
Del.quantity cm3/: 101.0...105.0
1000H.: (99.0...107.0)
Dispersion
               cm3/:-
              1000H.: -
Charge press. hPa: 600
Speed
              1/min: 900
Del.quantity cm3/: 107.5...111.5
1000H:: (105,5...113,5)
               cm3/: -
Dispersion
              1000H.: -
Charge press. hPa : -
              1/min : 500
Speed
Del.quantity cm3/: 69,5...71,5
1000H.: (66,5...74,5)
              cm3/: -
Dispersion
```

Note inst. in remarks column

Test sheet : CAT 7,0 A4

Edition : 9.86

Superceeded

: ISO-4113 Calibrating oil

Combination no. : 9 400 087 351

Injection pump

Pump designation : PES4P80A720LS440

EP type number : 9 400 087 351

Governor

Governor design. : RQV350...950PA609-3

: 9 420 080 198 Governer no.

Customer-spec. information

: CATERPILLAR Customer

: 3304 PC Engine

1st version kW : 55 1/min: 1900 Speed

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. C

: 38...42

Overflow valve

: 1 417 413 000

Inlet press., bar: 1.5

Calibrating nozzle-holder

: 0 861 343 009 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter

x Wall thickness

: 6,00x1,50x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant.

per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 1,95...2,05 Prestroke mm

: (1,90...2,10)

Contr.-rod trav.mm: 9,0...12,0

Cam sequence : 1-3-4-2 HIGHEST RATED SPEED 1st version Control-lever position degrees: 62...71 SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75) Testing: 1st c-rod trav.mm : 10,3 Speed 1/min: 980...990 2nd c-rod trav.mm: 4.0 Speed 1/min: 1040...1070 SD mark cyl. no. : 1 BASIC SETTING 1/min : 1150 4th speed 1/mi: 950 C-rod trav.mm : 0...1,0 1st speed Contr.-rod trav.mm: 11,30...11,40 LOWEST RATED SPEED I Control-lever Del.quantity cm3/: 8,65...8,75 position degrees: 13...21 100H.: (8,50...8,90) Testing: 1/min : 100 Speed C-rod trav.mm min: 11.0 Speed 1/min: 350 Dispersion cm3/:0.25100H.: (0,40) C-rod trav.mm : 6,3...6,5 nm : 2,0 1/min : 540...600 C-rod trav.mm 1/min: 350 2nd speed Speed Contr.-rod trav. m: 6,7...6,9 Del.quantity cm3/: 0.85...1.55 100H.: (0.65...1.75) Dispersion cm3/: 0.20 100H.: (0.35) CONSTANT REGULATION 1/min : 300...400 Speed TORQUE CONTROL Torque-control curve - 1st version 1/min : 950 (B) Setting of injection pump with 1st speed externally-mounted governor C-rod trav.mm : 11,3...11,4 2nd speed 1/min: 500 C-rod trav.mm : 12,2...12,3 3rd speed 1/min : 700 SLEEVE TRAVELS 1st speed 1/min: 325 Sleeve travel mm: 0.5...2,0 2nd speed 1/min: 400 Sleeve travel mm: 2,7...3,1 C-rod trav.mm : 12,1...12,3 4th speed 1/min : 800 C-rod trav.mm : 11,7...12,0 3rd speed 1/min: 500 Sleeve travel mm: 3,5...4,2 SWITCH-OVER POINT 1/min: 800 1/min : 290 (310) 4th speed Speed Sleeve travel mm: 6,1...6,6 5th speed 1/min: 1010 FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 500 Del.quantity cm3/: 93,0...95,0 1000H.: (92,0...96,0) Sleeve travel mm: 8,4...8,6 SLEEVE POSITION cm3/:Control-lever position Dispersion 1000H.: -Degree: MAX. 1/min : 700 17min: 1010 Speed Del.quantity cm3/: 95,5...97,5 1000H.: (94,5...98,5) Cont.-rod travelmm: 15,2...17,8 FULL-LOAD DELIV. AT FULL-LOAD STOP Dispersion cm3/:-1000H.: -1st version Speed 1/min: 950 Del.quantity cm3/: 86,5...87,5 1000H.: (85,0...89,0) Dispersion cm3/: 2,5 1000H.: (4,0) Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0.5(0.75) Test sheet : CAT 7,0 A5 Edition : 09.86 Superceeded SD mark cyl. no. : 1 Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 9 400 087 352 1/mi: 1000 1st speed Injection pump Pump designation : PES4P80A720LS440 Contr.-rod trav.mm: 11,0...11,1 EP type number : 9 400 087 028 Governor Del.quantity cm3/: 8,35...8,45 Governor design. : RQV350...1000PA613-3 Governer no. 100H.: (8,20...8,60) : 9 420 080 217 Customer-spec. information cm3/:0.25Dispersion Customer : CATERPILLAR 100H.: (0,40) Engine : 3304 2nd speed 1/min: 350 Contr.-rod trav. m: 6,7...6,9 1st version kW : 55 Del.quantity cm3/: 0,85...1,55 Speed 1/min: 2000 100H.: (0,65...1,75) cm3/: 0,20 TEST BENCH REQUIREMENTS Dispersion 100H.: (0,35) Calibrating-oil inlet temp. °C (B) Setting of injection pump with : 38...42 externally-mounted governor Overflow valve : 1 417 413 000 SLEEVE TRAVELS 1st speed 1/min: 325 Inlet press., bar : 1.5 Sleeve travel mm: 0,5...2,0 2nd speed 1/min: 400 Sleeve travel mm: 2,7...3,1 ad speed 1/min: 500 Sleeve travel mm: 3,5...4,2 Calibrating nozzle-holder : 0 681 343 009 assembly 3rd speed 4th speed 1/min: 800 Opening : 172...175 Sleeve travel mm: 6,1...6,6 pressure, bar 5th speed 1/min: 1010 Sleeve travel mm: 8,4...8,6 : 1 680 750 015 Test inj. tubing SLEEVE POSITION Outside diameter Control-lever position Degree: MAX. 1/min: 1010 x Wall thickness : 6,00x1,50x600 x Length mm Cont.-rod travelmm: 15,2...17,8 (A) Injection pump setting values FULL-LOAD DELIV. AT FULL-LOAD STOP Insp. values in parentheses Set constant delivery quant. per values ____ 1st version Speed 1/min: 1000 Del.quantity cm3/: 83,5...84,5 START OF DELIVERY 1000H.: (82,0...86,0) cm3/ : 2,5 : 1,95...2,05 : (1,90...2,10) Prestroke mm Dispersion 1000H.: (4,0) Contr.-rod trav.mm: 9,0...12,0 Cam sequence : 1-3-4-2 HIGHEST RATED SPEED **B23**

```
1st version
Control-lever
 position degrees: 65...74
Testing:
1st c-rod trav.mm : 10,0
          1/min : 1030...1040
  Speed
2nd c-rod trav.mm : 4,0
           1/min : 1090...1120
  Speed
4th speed 1/min: 1170
                  0 نر 1 . . . 0 :
  C-rod trav.mm
LOWEST RATED SPEED I
Control-lever
 position degrees: 13...21
Testing:
            1/min : 250
Speed
C-rod trav.mm min : 11.0
            1/min : 350
Speed
C-rod trav.mm
                  : 6,5...6,7
            nm : 2,0
1/min : 550...610
C-rod trav.mm
Speed
CONSTANT REGULATION
Speed
            1/min : 300...400
TORQUE CONTROL
Torque-control curve - 1st version
1st speed
           1/min : 1000
                   : 11,0...11,1
  C-rod trav.mm
2nd speed 1/min : 500
           av.mm : 11,5...11,6
1/min : 700
  C-rod trav.mm
3rd speed
                   : 11,4...11,6
  C-rod trav.mm
4th speed 1/min : 800
  C-rod trav.mm : 11,2...11,5
SWITCH-OVER POINT
            1/min: 290(310)
Speed
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 500
Del.quantity cm3/: 80,0...82,0
            1000H.: (79,0...83,0)
             cm3/:
Dispersion
            1000H.: -
            1/min : 700
Speed
Del.quantity cm3/: 87,0...89,0
            1000H.: (86,0...90,0)
             cm3/:-
Dispersion
            1000H.: -
```

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                       Cam sequence : 1-5-3-6-2-4
Note inst. in remarks column
                                                       SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75)
Test sheet
                    : FOR 6,6 D
                   : 15.12.86
: 2.86
Edition
Superceeded
                  : ISO-4113
Calibrating oil
                                                       SD mark cyl. no. : 1
Combination no.
                   : 9 400 087 353
                                                       BASIC SETTING
                                                                       1/mi: 1300
Injection pump
                                                       1st speed
Pump designation : PES6P110A72ORS3157
EP type number
                    : 9 400 087 048
                                                       Contr.-rod trav.mm: 13,0...13,1
Governor
Governor design. : RQV350...1300PA788
                                                       Del.quantity cm3/: 12,5...12,7
Governer no.
                    : 9 4200 080 215
                                                                      100H<sub>s</sub>: (12,3...12,9)
Customer-spec. information
                                                       Dispersion
                                                                      cm3/:0.50
1st version kW : 125.1
              1/min: 2600
                                                                      100H.: (0,75)
Speed
                                                       2nd speed 1/min: 350
Contr.-rod trav. m: 7,9...8,1
Del.quantity cm3/: 1,9...2,3
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                                                                      100H.: (1,65,..2,55)
cm3/: 0,35
100H.: (0,55)
                    : 38...42
                                                       Dispersion
Overflow valve
                    : 1 417 413 025
                                                        (B) Setting of injection pump with
                                                            externally-mounted governor
Inlet press., bar: 1.5
                                                       SLEEVE TRAVELS
Calibrating nozzle-holder
           : 1 688 901 017
                                                       1st speed 1/min: 350
Sleeve travel mm: 0,6...1,3
 assembly
                                                                   1/min: 500
Opening
                                                       2nd speed
                    : 207...210
                                                         Sleeve travel mm: 2,3...2,7
 pressure, bar
                                                       3rd speed
                                                                     1/min: 800
                                                         Sleeve travel mm: 4,0...4,3
Perforated-plate
                                                       4th speed 1/min: 1000
 diameter mm
                    : 0,6
                                                       Sleeve travel mm: 5,0...5,3
5th speed 1/min: 1300
Sleeve travel mm: 7,2...7,3
Test inj. tubing : 1 680 750 015
                                                       SLEEVE POSITION
Outside diameter
x Wall thickness
                                                       Control-lever position
                   : 6,00x1,50x600
x Length mm
                                                                    Degree: MAX.
                                                                      17min: 1350
                                                       Speed
                                                       Cont.-rod travelmm: 15,2...17,8
(A) Injection pump setting values
    Insp. values in parentheses
                                                       FULL-LOAD DELIV. AT FULL-LOAD STOP
    Set constant delivery quant.
    per values ____
                                                       1st version
START OF DELIVERY
                                                                      1/min: 1300
                                                       Speed
Test pressure, bar: 25...27
                                                       Charge press. hPa : 900
                                                       Del.quantity cm3/: 125.0...127.0
1000H.: (123.0...129.0)
Dispersion cm3/: 5.0
                    : 4,25...4,35
Prestroke mm
                    : (4,20...4,40)
                                                                     1000H.: (9.0)
Contr.~rod trav.mm: 9,0...12,0
B25
```

```
HIGHEST RATED SPEED
1st version
Control-lever
 position degrees: 60...68
Testing:
1st c-rod trav.mm : 12,0
           1/min : 1360...1370
  Speed
2nd c-rod trav.mm : 4.0
Speed 1/min : 1490...1520
  Speed
            1/min : 1620
4th speed
  C-rod trav.mm : 0...1,0
LOWEST RATED SPEED I
Control-lever
 position degrees: 11...19
Testing:
             1/min : 100
Speed
C-rod trav.mm min: 9.5
Speed 1/min: 350
                : 7,9...8,1
C-rod trav.mm
C-rod trav.mm
                   : 2,0
            1/min: 620...680
Speed
CONSTANT REGULATION
            1/min: 370...440
Speed
 compensator (LDA, ADA, ALDA)
1st version
Setting
             1/min : 500
Speed
            hPa : 900
Pressure
Contr.-rod trav.mm: 13,0...13,1
Measurement
            1/min : 500
Speed
1st pressure hPa
                   : 11,4...11,5
 C-rod trav.mm
2nd pressure hPa
                  : 650
C-rod trav.mm : 12,4...12,6
3rd pressure hPa : 530
                   9 - 11 - 8 - 11
  C-rod trav.mm
SWITCH-OVER POINT
            1/min : 290(310)
Speed
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press, hPa: 900
            1/min : 800
Speed
Del.quantity cm3/: 99.0...103.0
             1000H.: (97.0...105.0)
             cm3/:
Dispersion
             1000H.: -
```

Charge press. hPa : Speed 1/min : 500
Del.quantity cm3/ : 60,0...62,0
1000H.: (57,0...65,0)
Dispersion cm3/ : 1000H.: -

Note inst. in remarks column

Test sheet : FOR 6,6 E Edition : 15.12.86 Superceeded : 2.86 Calibrating oil : ISO-4113 : FOR 6,6 E

Combination no. : 9 400 087 354

Injection pump

Pump designation : PES6P110A720RS3158

EP type number : 9 400 087 049

Governor

Governor design. : RQV350...1300PA787

Governer no. : 9 420 080 218

Customer-spec. information : FORD (FTO) Customer

: 6,6 L - TC Engine

1st version kW : 129.2 Speed 1/min: 2600

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar : 1.5

Calibrating nozzle-holder

: 1 688 901 017 assembly

Opening

pressure, bar : 207...210

Perforated-plate

: 0,6 diameter mm

Test inj. tubing : 1 680 750 015

Outside diameter

x Wall thickness

: 6,00x1,50x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

FULL-LOAD DELIV. AT FULL-LOAD STOP : 4,25...4,35 Prestroke mm : (4,20...4,40; Contr.-rod trav.mm: 9,0...12,0 Cam sequence : 1-5-3-6-2-4 1st version Speed 1/min: 1300 Del.quantity cm3/: 112.5...114.5 1000%:: (110.5...116.5) Dispersion cm3/ : 5.0 SD ang. spacing 0 CS: 0-60-130-180-240-300 Tolerance + - 0 : 0,5(0,75) 1000H.: (9.0) HIGHEST RATED SPEED SD mark cyl. no. : 1 1st version Control-lever START OF DELIVERY DIFFERENCE position degrees: 58...66 betw.c-rod trav.mm: 9,0...12,0 Testing: & c-rod tray max. : 21.0 Difference CS : 3,5...4,5 1st c-rod trav.mm : 10,6 Speed 1/min: 1360...1370 2nd c-rod trav.mm : 4,0 BASIC SETTING 1/min : 1470...1500 Speed 4th speed 1/min: 1600 1st speed 1/mi: 1300 C-rod trav.mm : 0...1.0 Contr.-rod trav.mm: 11,6...1,7 LOWEST RATED SPEED I Control-lever Del.quantity cm3/: 11,25...11,45 position degrees: 11...19 Testing: 100H.: (11,05...11,65) 1/min : 100 Speed C-rod trav.mm min: 9.5
Speed 1/min: 350
C-rod trav.mm : 7.7...7.9
C-rod trav.mm : 2.0 Dispersion cm3/:0.5100H.: (0,9) 2nd speed 1/min: 350 Contr.-rod trav. m: 7,7...7,9 1/min : ĕ90...750 Speed Del.quantity cm3/: 2,0...2,4 CONSTANT REGULATION 100H.: (1,75...2,65) cm3/: 0,35 100H.: (0,55) 1/min : 370...440 Speed Dispersion TORQUE CONTROL Dimension a mm : ? (B) Setting of injection pump with Torque-control curve - 1st version externally-mounted governor 1st speed 1/min : 1300 C-rod trav.mm : 11,6...11,7 1/min : 800 SLEEVE TRAVELS 2nd speed 1st speed 1/min: 350 C-rod trav.mm : 12,1...12,2 3rd speed 1/min : 900 Sleeve travel mm: 0,6...1,3 2nd speed 1/min: 500 Sleeve travel mm: 2,3...2,7 3rd speed 1/min: 800 C-rod trav.mm : 12,0...12,2 4th speed 1/min : 1050 C-rod trav.mm : 11,85...11,90 Sleeve travel mm: 4,0...4,3 4th speed 1/min: 1000 SWITCH-OVER POINT Sleeve travel mm: 5_0...5,3 1/min : 290(310) Speed 5th speed 1/min: 1300 Sleeve travel mm: 7,2...7,3 FUEL-DELIVERY CHARACTERISTICS 1/min : 800 Speed Del.quantity cm3/: 95.5...99.5 1000H:: (93.5...101.5) SLEEVE POSITION Control-lever position Degree: MAX. Dispersion cm3/: -17min: 1350 1000H.: -Speed Cont.-rod travelmm: 15,2...17,8 Speed 1/min : 900

Del.quantity cm3/: 101,0...106,0 1000H.: (99,0...108,0) Dispersion cm3/: -1000H.: -

Note inst. in remarks column

Test sheet Edition : CAT 7,0 E : 17.11.86

Superceeded

Calibrating oil : ISO-4113

Combination no. : 9 400 087 362

Injection pump

Pump designation : PES4P100A720LS501

: 9 400 087 051 EP type number

Governor

Governor design. : RQV350...1100PA828 Governer no. : 9 420 080 232

Customer-spec. information

: CATERPILLAR Customer

: 3304 DIT Engine

1st version kW : 81.3 1/min: 2200 Speed

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 9 401 087 214

Inlet press., bar : 2.0

Calibrating nozzle-holder

: 1 688 901 017 assembly

Opening

pressure, bar : 207...219

Perforated-plate

diameter mm : 0,6

Test inj. tubing : 1 680 750 008

Outside diameter

x Wall thickness

: 6,00x2,00,600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 3.95...4.05 : (3.90...4.10) Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-3-4-2 Del.quantity cm3/: 131.0...132.0 1000H.: (129.0...134.0) Dispersion cm3/: 3.5 1000H.: (6.0) HIGHEST RATED SPEED 1st version SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0.5(0.75) Control-lever position degrees: 61...69 SD mark cyl. no. : 1 Testing: 1st c-rod trav.mm : 9.60 Speed 1/min : 1140...1150 2nd c-rod trav.mm : 4.00 BASIC SETTING Speed 1/min: 1200...1230 4th speed 1/min: 1350 Contr.-rod trav.mm: 10.60...10.70 C-rod trav.mm : 0.00...1.00 Del.quantity cm3/: 13.1...13.2 LOWEST RATED SPEED I Control-lever 100H.: (12.9...13.4) position degrees: 9...17 Dispersion cm3/: 0.35 Testing: Speed 1/min : 100 100H.: (0.6) C-rod trav.mm min : 3.00 Speed 1/min: 350 C-rod trav.mm: 5.10...5.30 C-rod trav.mm: 2.00 Speed 1/min: 530...590 2nd speed 1/min: 350 Contr. rod trav. m: 6.40...6.60

Del.quantity cm3/: 1.5...1.9

100H.: (1.25...2.15)

Dispersion cm3/: 0.35 CONSTANT REGULATION 100H.: (0.55) 1/min : 370...440 Speed (B) Setting of injection pump with externally-mounted governor compensator (LDA,ADA,ALDA) SLEEVE TRAVELS 1st version 1st speed 1/min: 350 Sleeve travel mm: 1.30...1.50 Setting 1/min : 500 Speed Pressure hPa : 600 2nd speed 1/min: 500 Contr.-rod trav.mm: 10.60...10.70 Sleeve travel mm: 2.90...3.20 3rd speed 1/min: 700 Sleeve travel mm: 4.50...4.80
4th speed 1/min: 900
Sleeve travel mm: 6.00...6.20
5th speed 1/min: 1150 Measurement Speed 1/min : 500 1st pressure hPa : -C-rod trav.mm : 8.70...8.80 2nd pressure hPa : 310 Sleeve travel mm: 8.50...8.60 C-rod trav.mm : 10.10...10.20 SLEEVE POSITION Control-lever position 3rd pressure hPa : 210 Degree: -1 Speed 1/min: 1150 Cont.-rod travelmm: 15.20...17.80 C-rod trav.mm : 9.10...9.30 SWITCH-OVER POINT Speed 1/min : 270 (310) FULL-LOAD DELIV. AT FULL-LOAD STOP FUEL-DELIVERY CHARACTERISTICS 1st version Speed 1/min: 1100 1st version Charge press. hPa : 600 Charge press. hPa : 600 Speed 1/min: 700

CO3

Del.quantity cm3/: 123.0...127.0 1000H.: (121.0...129.0) Charge press. hPa: -Speed 1/min: 1100 Del.quantity cm3/: 90.0...92.0 1000H.: (88.0...94.0)

Note inst. in remarks column

Test sheet Edition Superceeded : CAT 10,5 G2 : 3.12.86

Calibrating oil : ISO-4113

Combination no. : 9 400 087 363

Injection pump

Pump designation : PES6P100A720LS502

EP type number : 9 400 087 050

Governor

Governor design. : RQV350...1100PA828

Governer no. : 9 420 080 232

Customer-spec. information

Customer : CATERPILLAR

: 3306 DITA Engine

1st version kW : 135.0 Speed 1/min: 2200

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. C : 38...42

Overflow valve

: 9 401 087 348

Inlet press., bar : 2.0

Calibrating nozzle-holder

: 1 688 901 017 assembly

Opening

pressure, bar : 207...210

Per for a ted-plate

diameter mm : 0,6

Test inj. tubing : 1 680 750 008

Outside diameter

x Wall thickness

: 6,00x2,00x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

Del.quantity cm3/: 153.0...155.0 1000H.: (151.0...157.0) Dispersion cm3/: 3.5 1000H.: (6.0) Prestroke mm : 3.95...4.05 : (3.90...4.10) Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5-3-6-2-4 HIGHEST RATED SPEED 1st version SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0.5(0.75) Control-lever position degrees: 62...70 SD mark cyle no. : 1 Testina: 1st c-rod trav.mm : 11.90 Speed 1/min : 1140...1150 BASIC SETTING 2nd c-rod trav.mm: 4.00 Speed 1/min: 1250...1280 4th speed 1/min: 1350 1/mi: 1100 1st speed Contr.-rod trav.mm: 12.90...13.00 C-rod trav.mm : 0.00...1.00 Del.quantity cm3/: 15.3...15.5 LOWEST RATED SPEED I Control-lever 100H.: (15.1...15.7) position degrees: 9...17 Dispersion cm3/: 0.35 Testing: Speed 1/min : 100 100H.: (0.6) C-rod trav.mm min: 8.00 1/min : 350 Speed C-rod trav.mm : 4.90...5.10 C-rod trav.mm : 2.00 Speed 1/min : 500...560 2nd speed 1/min: 350 Contr.-rod trav. m: 6.40...6.60

Del.quantity cm3/: 1.3...1.7

100H.: (1.05...1.95)

Dispersion cm3/: 0.35

100H.: (0.55) CONSTANT REGULATION Speed 1/min: 370...440 compensator (LDA,ADA,ALDA) (B) Setting of injection pump with externally-mounted governor SLEEVE TRAVELS 1st version 1st speed 1/min: 350
Sleeve travel mm: 1.30...1.50
2nd speed 1/min: 500
Sleeve travel mm: 2.90...3.20 Setting Speed 1/min: 500 Pressure hPa: 600 Contr.-rod trav.mm: 12.90...13.00 3rd speed 1/min: 700 Sleeve travel mm: 4.50...4.80 Measurement 4th speed 1/min: 900 Speed 1/min : 500 Sleeve travel mm: 6.00...6.20 5th speed 1/min: 1150 Sleeve travel mm: 8.50...8.60 1st pressure hPa : -C-rod trav.mm : 9.90...10.00 2nd pressure hPa : 340 C-rod trav.mm : 12.00...12.10 3rd pressure hPa : 200 SLEEVE POSITION Control-lever position C-rod trav.mm : 10.60...10.80 Degree: -1 17min: 1150 Cont.-rod travelmm: 15.20...17.80 SWITCH-OVER POINT Speed 1/min : 290(310) FULL-LOAD DELIV. AT FULL-LOAD STOP FUEL-DELIVERY CHARACTERISTICS 1st version Speed 1/min: 1100 1st version Charge press. hPa : 600 Charge press. hPa : 600 Speed 1/min : 700

CO6

Del.quantity cm3/: 159.0...163.0 1000H.: (157.0...165.0) Dispersion cm3/: 5.0 1000H.: (7.0) Charge press. hPa: -Speed 1/min: 1100 Del.quantity cm3/: 108.0...110.0 1000H.: (106.0...112.0)

}

Note inst. in remarks column

Test sheet Edition : FOR 7,8 B 1 : 15.12.86

Superceeded

Calibrating oil : ISO-4113

Combination no. : 9 400 087 367

Injection pump

Pump designation : PES6P110A720RS3151

EP type number : 9 400 087 047

Governor

Governor design. : RQV350...1200PA777-1 Governer no. : 9 420 080 234

Customer-spec. information Customer : FORD (FTO)

: 7.8 L TC Engine

1st version kW : 165.6 1/min: 2400 Speed

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. OC

: 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder

: 1 688 901 017 assembly

Opening

pressure, bar : 207...210

Perforated-plate

: 0,6 diameter mm

Test inj. tubing : 1 680 750 015

Outside diameter x Wall thickness

x Length mm : 6,00X1,50X600

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant.

per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 4.25...4.35 Dispersion cm3/ : 5.0 Prestroke mm : (4.20...4.40) 1000H.: (9.0) Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5-3-6-2-4 HIGHEST RATED SPEED 1st version Control-lever position degrees: 56...64 SD ang. spacing CS: 0-60-120-180-240-300 Testing: SD mark cyl. no. : 1 1st c-rod trav.mm : 13.10 Speed 1/min: 1260...1270 2nd c-rod trav.mm : 4.00 BASIC SETTING Speed 1/min: 1425...1455 th speed 1/min: 1600 C-rod trav.mm: 0.00...1.00 4th speed 1st speed 1/mi: 1200 Contr.-rod trav.mm: 14.10...14.20 LOWEST RATED SPEED I Del.quantity cm3/ : 14.1...14.3 Control-lever position degrees: 11...19 100H.: (13.9...14.5) Testing: Speed 1/min: 100 C-rod trav.mm min: 3500 Speed 1/min: 7.40. Dispersion cm3/: 0.50100H.: (0.90) C-rod trav.mm : ..7.60 C-rod trav.mm : 2.00 2nd speed 1/min: 359 Contr.-rod trav. m: 7.40...7.60 Del.quantity cm3/: 1.6...2.0 100H.: (1.3...2.2) Dispersion cm3/: 0.35 100H.: (0.55) 1/min : 620...680 Speed CONSTANT REGULATION 1/min : 370...440 Speed compensator (LDA, ADA, ALDA) (B) Setting of injection pump with externally-mounted governor 1st version SLEEVE TRAVELS Setting 1st speed 1/min: 350 Sleeve travel mm: 0.60...1.30 1/min : 500 hPa : 800 Speed Pressure Contr.-rod trav.mm: 13.80...13.90 2nd speed 1/min: 500 Sleeve trave! mm: 2.30...2.70 3rd speed 1/min: 800 Measurement Sleeve travel mm: 4.00...4.30 4th speed 1/min: 1000 1/min : 500 Speed Sleeve travel mm: 5.00...5.30 5th speed 1/min: 1300 Sleeve travel mm: 7.20...7.30 1st pressure hPa : -C-rod trav.mm : 12.10...12.20 2nd pressure hPa : 580_____ C-rod trav.mm : 13.70...13.80 3rd pressure hPa : 390 SLEEVE POSITION C-rod trav.mm : 12.60...12.80 Control-lever position Degree: -3 17min: 1350 SWITCH-OVER POINT Speed Cont.-rod travelmm: 15.20...17.80 1/min : 290(310) Speed FULL-LOAD DELIV. AT FULL-LOAD STOP FUEL-DELIVERY CHARACTERISTICS 1st version 1st version Charge press. hPa: 800 Speed 1/min: 1200 Speed 1/min: 800 Charge press. hPa : 800 Del.quantity cm3/: 141.5...143.5 1000H.: (139.5...145.5) Del.quantity cm3/: 119.0...121.0 1000H.: (117.0...123.0) C09

```
Note inst. in remarks column
Test sheet
                  : VOL 10,0 Q9
Edition
                  : 10.86
Superceeded
Calibrating oil : ISO-4113
Combination no.
                  : 9 400 087 368
Injection pump
Pump designation : PE6P110A320RS3108V
                  : 0 411 816 737
EP type number
Governor
Governor design. : RQV250...1100PA589-1
Governer no. : 9 420 080 166
Customer-spec. information
Customer
                  : VOLVO
                  : THD 101 FD
Engine
1st version kW : 210
             1/min: 2200
Speed
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                  : 38...42
Overflow valve
                   : 1 417 413 025
Inlet press., bar: 1.5
Calibrating nozzle-holder
                : 0 681 343 009
 assembly
Opening
 pressure, bar : 172...175
Test inj. tubing : 1 680 750 015
Outside diameter
x Wall thickness
                  : 6,00x1,50x600
x Length mm
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
    per values ____
START OF DELIVERY
Test pressure, bar: 25...27
                  : 3,00...3,10
: (2,95...3,15)
Prestroke mm
Contr.-rod trav.mm: 9,0...12,0
```

Cam sequence : 1-5-3-6-2-4 HIGHEST RATED SPEED 1st version Control-lever SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) position degrees: 61...69 Testing: 1st c-rod trav.mm : 12.7 Speed 1/min : 1140...1150 SD mark cyl. no. : 1 2nd c-rod trav.mm : 4,0 BASIC SETTING 1/min : 1220...1250 Speed 1st speed 1/mi: 700 4th speed 1/min : 1350 C-rod trav.mm : 0...1.0 Contr.-rod trav.mm: 13,7...13,8 LOWEST RATED SPEED I Del.quantity cm3/: 18,0...18,2 Control-lever position degrees: 7...15 100H.: (17,7...18,5) Testing: Dispersion cm3/:0.4Speed 1/min: 100 C-rod trav.mm min : 6,7 Speed 1/min : 250 100H.: (0,75) C-rod trav.mm : 5,4...5,6 C-rod trav.mm : 2,0 Speed 1/min : 345...405 2nd speed 1/min: 250 Contr.-rod trav. m: 5,4...5,6

Del.quantity cm3/: 3,2...3,6

100H.: (2,95...3,85)

Dispersion cm3/: 0,3

100H.: (0,6) compensator (LDA, ADA, ALDA) 1st version Setting (B) Setting of injection pump with externally-mounted governor 1/min : 500 Speed Pressure hPa : 1200 SLEEVE TRAVELS Contr.-rod trav.mm: 13,7...13,8 1st speed 1/min: 250
Sleeve travel mm: 1,2...1,3
2nd speed 1/min: 370
Sleeve travel mm: 2,6...3,0 Measurement 1/min : 500 Speed C-rod trav.mm : 9,8...9,9 2nd pressure hPa : 720 1/min: 430 3rd speed C-rod trav.mm : 12,8...12,9 3rd pressure hPa : 360 Sleeve travel mm: 3,5...3,9 4th speed 1/min: 1160 Sleeve travel mm: 8,1...8,3 5th speed 1/min: 1210 C-rod trav.mm : 10,9...11,0 Sleeve travel mm: 9,4...9,6 FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 700
Del.quantity cm3/: 108.0...110.0
1000H.: (105.0...113.0) SLEEVE POSITION Control-lever position cm3/ : Dispersion Degree: MAX. Speed 1000H.: -17min: 1175 Cont.-rod travelmm: 15,2...17,8 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Remarks: Speed 1/min: 700 Because of flattening, set the spring Charge press. hPa : 1200 preload on new delivery-valve holders Del.quantity cm3/: 180_0...182_0 to 2.9...3.1 mm. 1000H.: (177,0...185,0) Dispersion cm3/: 4.0 1000H.: (7,5) C12

APPLICATION 0mn i bus C13

BOSCH INJ. PUMP TEST SPECIFICATIONS Cam sequence : 1-5-3-6-2-4 Note inst. in remarks column SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) Test sheet : VOL 10,0010 : 10.86 Edition Superceeded Calibrating oil : ISO-4113 SD mark cyl. no. : 1 : 9 400 087 369 BASIC SETTING Combination no. Injection pump 1st speed 1/mi: 700 Pump designation : PE6P110A320RS3108Z Contr.-rod trav.mm: 10,5...10,6 EP type number : 0 411 816 728 Governor Del.quantity cm3/: 12,0...12,3 Governor design. : RQV250...1100PA589-1 Governer no. : 9 420 080 166 100H.: (11,8...12,6) Customer-spec. information cm3/:0,4Customer : VOLVO Dispersion 100H.: (0,75) : THD101GB Engine 1st version kW : 160 1/min: 250 2nd speed Contr.-rod trav. m: 5,4...5,6 Del.quantity cm3/: 3,2...3,6 1/min: 2200 Speed cm3/:0.3TEST BENCH REQUIREMENTS Dispersion 100H.: (0,6) Calibrating-oil inlet temp. °C : 38...42 (B) Setting of injection pump with externally-mounted governor Overflow valve : 1 417 413 025 SLEEVE TRAVELS 1st speed 1/min: 250 Sleeve travel mm: 1,2...1,3 Inlet press., bar: 1.5 2nd speed 1/min: 370 Sleeve travel mm: 2,6...3,0
3rd speed 1/min: 430
Sleeve travel mm: 3,5...3,9 Calibrating nozzle-holder : 0 681 343 009 assembly 4th speed 1/min: 1160 Opening. pressure, bar : 172...175 Sleeve travel mm: 8,1...8,3 5th speed 1/min: 1210 Sleeve travel mm: 9.4...9.6 Test inj. tubing : 1 680 750 015 SLEEVE POSITION Outside diameter Control-lever position Degree: MAX. 1/min: 1175 x Wall thickness : 6,00x1,50x600 x Length mm Cont.-rod travelmm: 15,2...17,8 (A) Injection pump setting values FULL-LOAD DELIV. AT FULL-LOAD STOP Insp. values in parentheses Set constant delivery quant. per values ____ 1st version Speed 1/min: 700 Charge press. hPa: 750 Del.quantity cm3/: 120.0...123.0 1000H.: (118.0...126.0) START OF DELIVERY Test pressure, bar: 25...27 : 3.00...3.10 : (2.95...3.15) Dispersion cm3/ : 4,0 Prestroke mm 1000H.: (7.5) Contr.-rod trav.mm: 9,0...12,0 C14

```
HIGHEST RATED SPEED
1st version
Control-lever
 position degrees: 52...60
Testing:
1st c-rod trav.mm : 9,5

Speed 1/min : 1140...1150

2nd c-rod trav.mm : 4,0

Speed 1/min : 1205...1235

4th speed 1/min : 1350
  C-rod trav.mm : 0...1.0
LOWEST RATED SPEED I
Control-lever
 position degrees: 8...12
Testing:
             1/min : 100
Speed
C-rod trav.mm min : 6,9
Speed
             1/min : 250
                : 5,4...5,6
: 2,0
C-rod trav.mm
C-rod trav.mm
             1/\min : 350...410
Speed
 compensator (LDA,ADA,ALDA)
1st version
Setting
             1/min : 500
Speed
             hPa : 750
Pressure
Contr.-rod trav.mm: 10,5...10,6
Measurement
             1/min : 500
Speed
1st pressure hPa
                    : 9,6...9,8
  C-rod trav.mm
2nd pressure hPa : 250
  C-rod trav.mm : 10,3...10,4
3rd pressure hPa : 220
                    : 10,0...10,2
  C-rod trav.mm
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 700
Del.quantity cm3/: 104,5...107,5
             1000H.: (102,0...110,0)
Dispersion
              cm3/ : -
             1000H.: -
Remarks:
Because of flattening, set the spring
preload on new delivery-valve holders
to 2.9...3.1 mm.
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APPLICATION

Omnibus

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                    Cam sequence : 1-2-7-3-4-5-6-8
Note inst. in remarks column
                                                    SD ang. spacing CS: 0-45-90-135-180-225-
                   : SCA 14,2 A4
Test sheet
                   : 17.11.86
Edition
                                                                          270-315
                                                    Tolerance + - 0
Superceeded
                                                                       : 0.5(0.75)
Calibrating oil : ISO-4113
                                                    SD mark cyl. no. : 1
Combination no.
                   : 9 400 087 372
                                                    BASIC SETTING
Injection pump
Pump designation : PE8P12OA92O/4LS7OO2T
                                                                   1/mi: 700
                                                    1st speed
EP type number
                  : 9 400 087 054
                                                    Contr.-rod trav.mm: 13.20...13.30
Governor
Governor design. : RQV200...1000PA547-2
                                                    Del.quantity cm3/: 18.7...18.9
Governer no. : 9 420 080 238
Customer-spec. information
                                                                  100H.: (18.4...19.2)
Customer
                   : SAAB-SCANIA
                                                    Dispersion
                                                                  cm3/:0.6
                   : DSC 14 07
Engine
                                                                  100H.: (0.9)
TEST BENCH REQUIREMENTS
                                                    2nd speed
                                                                  1/min: 225
Calibrating-oil inlet temp. <sup>D</sup>C
                                                    Contr.-rod trav. m: 4.90...5.10
                   : 38...42
                                                    Del.quantity cm3/: 1.0...1.4
                                                                  100H.: (-)
                                                                  cm3/: 0.3
100H.: (0.6)
Overflow valve
                                                    Dispersion
                   : 1 417 413 015
                                                     (B) Setting of injection pump with
Inlet press., bar: 1.5
                                                         externally-mounted governor
Calibrating nozzle-holder
                : 1 688 901 019
                                                    SLEEVE TRAVELS
 assembly
                                                    1st speed 1/min: 225
                                                      Sleeve travel mm: 1.00...1.60
Opening
                  : 207...210
                                                    2nd speed 1/min: 350
 pressure, bar
                                                    Sleeve travel mm: 2.50...2.90
3rd speed 1/min: 650
Perforated-plate
                                                      Sleeve travel mm: 4.60...4.90
 diameter mm
                   : 0,8
                                                    4th speed 1/min: 1140
                                                      Sleeve travel mm: 8.40...8.50
                  : 1 680 750 015
Test inj. tubing
                                                    SLEEVE POSITION
Outside diameter
                                                    Control-lever position
                                                    Degree: -1
Speed 1/min: 1000
Cont.-rod travelmm: 15.20...17.80
x Wall thickness
                  : 6,00x1,50x600
x Length mm
(A) Injection pump setting values
    Insp. values in parentheses
                                                    FULL-LOAD DELIV. AT FULL-LOAD STOP
    Set constant delivery quant.
    per values ____
                                                    1st version
                                                                  1/min: 700
                                                    Speed
START OF DELIVERY
                                                    Charge press. hPa : 600
                                                    Del.quantity cm3/: 187.0...189.0
1000H.: (184.0...192.0)
Dispersion cm3/: 6.0
1000H.: (9.0)
Test pressure, bar: 25...27
Prestroke mm
                   : 5.00...5.10
                   : (4.95...5.15)
Contr.-rod trav.mm: 9.00...12.00
C16
```

```
HIGHEST RATED SPEED
1st version
Control-lever
 position degrees: 56...64
Testing:
1st c-rod tray.mm : 12.20
  Speed 1/min: 1040...1050
2nd c-rod trav.mm : 4.00
          1/min : 1150...1180
1/min : 1250
  Speed
4th speed
  C-rod trav.mm : 0.00...1.00
LOWEST RATED SPEED I
Control-lever
 position degrees: 6...14
Testing:
            1/min : 100
Speed
C-rod trav.mm min : 5.90
Speed 1/min: 225
C-rod trav.mm : 4.40...4.60
                 : 2.00
C-rod trav.mm
           1/min : 310...370
Speed
 compensator (LDA, ADA, ALDA)
1st version
Setting
Speed
            1/min : 500
            hPa : 600
Pressure
Contr.-rod trav.mm: 13.20...13.30
Measurement
            1/min : 500
Speed
1st pressure hPa : -
 C-rod trav.mm : 11.30...11.40
2nd pressure hPa : 355
 C-rod trav.mm : 12.50...12.60
3rd pressure hPa : 260
  C-rod trav.mm
                 : 11.80...12.00
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 600
            1/min: 1000
Speed
Del.quantity cm3/: 183.0...191.0
            1000H.: (181.0...193.0)
Charge press. hPa : -
Speed 1/min: 500
Del.quantity cm3/: 137.0...141.0
1000H.: (135.0...143.0)
```

Because of flattening, set the spring preload on new delivery-valve holders to 3.0...3.1 mm.

Remarks:

C17

SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 M Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1100 : 9 400 230 022 Combination no. Contr.-rod trav.mm: 11,45 Injection pump Del.quantity cm3/ : 10,9...11,1 Pump designation : PES6A100D410RS3032 Governor Dispersion cm3/:0.30Governor design. : RSV400...1100A2B2086 1/min: 400 2nd speed Contr.-rod trav. m: 6,8 Del.quantity cm3/: 1.3...1,7 Dispersion cm3/: 0,40 Customer-spec. information Customer : JOHN DEERE SLEEVE POSITION Engine : 6466T Control-lever position Degree: LOSE TEST BENCH REQUIREMENTS 17min: 800 Calibrating-oil inlet temp. °C Cont.-rod travelmm: 0,3...1,0 : 38...42 Governor-spring reload Overflow valve Notch setting x : -: 1 413 385 007 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.5 1st version 1/min: 1100 Calibrating nozzle-holder Speed : 0 681 343 009 assembly Charge press. hPa : 1200 Del.quantity cm3/: 109,0...111,0 Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Control-lever position degrees: 35...43 Test inj. tubing : 9 681 230 706 Outside diameter Testing: x Wall thickness 1st c-rod trav.mm: 10,45 Speed 1/min: 1145...1155 2nd c-rod trav.mm: 4.0 Speed 1/min: 1195...1225 x Length mm : 6,00X2,00X600 (A) Injection pump setting values Insp. values in parentheses 1/min : 1250 4th speed Set constant delivery quant. C-rod trav.mm : 0,3...1,7 per values ____ LOWEST RATED SPEED I START OF DELIVERY Control-lever position degrees: 14...20 : 1,95...2,05 Setting point w/out aux. spring Prestroke mm : (1,90...2,10) Speed 1/min : 400 Contr.-rod trav.mm: 21,0 Contr.-rod trav.mm: 6.3 Cam sequence : 1-5-3-6-2-4 Testing: 1/min : 100 Speed C-rod trav.mm min: 19,0 1/min : 400 Speed

C-rod trav.mm : 6,8 : 2,0 C-rod trav.mm 1/min : 460...520 Speed Speed 1/min : 600 C-rod trav.mm max: 1.0

TORQUE CONTROL

Torque-control curve - 1st version

1/min : 1100 1st speed

C-rod trav.mm : 11,40...11,50

2nd speed 1/min : 1000

C-rod trav.mm : 11,35...11,65 3rd speed 1/min : 750

C-rod trav.mm : 12,75...12,95

compensator (LDA,ADA,ALDA)

1st version

Setting

1/min : 500 Speed Pressure hPa : 420

Contr.-rod trav.mm: 12,75...12,85

Measurement

1/min : 500 Speed

1st pressure hPa : 200

C-rod trav.mm : 11,10...11,50

FUEL-DELIVERY CHARACTERISTICS

1st version

Charge press. hPa : 1200 1/min : 650 Speed

Del.quantity cm3/: 126,0...129,0 Speed 1/min: 500

Del.quantity cm3/: 78,5...81,5

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : CAS 8,3 A3 Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1050 1st speed Combination no. : 9 400 230 019 Contr.-rod trav.mm: 10,35 Injection pump Del.quantity cm3/: 11,1...11,3 Pump designation : PES6A100D420LS3024 cm3/:0.30Dispersion Governor Governor design. : RSV375...1050A2B2072 2nd speed 1/min: 375 Contr.-rod trav. m: 6,3 Del.quantity cm3/: 1,7...2,3 Dispersion cm3/: 0,30 Customer-spec. information Customer : CASE : A 504 BDT SLEEVE POSITION Engine Control-lever position TEST BENCH REQUIREMENTS Degree: LOSE 17min: 800 Speed Calibrating-oil inlet temp. OC Cont.-rod travelmm: 0,3...1.0 : 38...42 Governor-spring reload Notch setting x : -Overflow valve : 9 681 273 009 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.5 1st version 1/min: 1050 Calibrating nozzle-holder Speed : 0 681 343 009 Del.quantity cm3/: 111,0...113,0 assembly 1000H.: (109,0...115,0) Opening. pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Control-lever Test inj. tubing : 9 681 230 706 position degrees: 47...55 Outside diameter Testing: x Wall thickness 1st c-rod trav.mm : 9,35 Speed 1/min: 1090...1100 2nd c-rod trav.mm: 4.0 Speed 1/min: 1170...1200 x Length mm : 6,00x2,00x600 (A) Injection pump setting values 1/min : 1250 Insp. values in parentheses 4th speed Set constant delivery quant. C-rod trav.mm : 0,3...1,7 per values ____ LOWEST RATED SPEED I START OF DELIVERY Control-lever position degrees: 24...32 Setting point w/out aux. spring : 2.0...2,1 Prestroke mm : (1,95...2,15) Contr.-rod trav.mm: 10,5 Speed 1/min : 375 Contr.-rod trav.mm: 5,7...5,9 Cam sequence : 1-5-3-6-2-4 Testing: Speed 1/min : 100 C-rod trav.mm min: 19.0 Speed 1/min : 375

C-rod trav.mm C-rod trav.mm : 6,2...6,4 : 2,0 1/min : 495...555 Speed TORQUE CONTROL Torque-control curve - 1st version 1/min : 1050 1st speed C-rod trav.mm : 10,35 2nd speed 1/min : 700 C-rod trav.mm : 10,55...10,85 3rd speed 1/min : 600_ C-rod trav.mm : 10,70...10,80

FUEL-DELIVERY CHARACTERISTICS

1/min : 700 Speed

Del.quantity cm3/: 110,0...116,0 1000H.: (109,0...117,0)

1/min : 600 Speed

Del.quantity cm3/: 108,0...111.0 1000H.: (104,0...115,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS BASIC SETTING Note inst. in remarks column 1st speed 1/mi: 890 Test sheet : DEE 7,6 K Contr.-rod trav.mm: 11,3 : 7.86 Edition Superceeded Del.quantity cm3/: 11,2...11,4 Calibrating oil : ISO.3114 cm3/:0,30Dispersion Combination no. : 9 400 230 023 1/min: 400 2nd speed Injection pump Contr.-rod trav. m: 6,2 Del.quantity cm3/: 1,3...1,7 Pump designation : PES6A100D410RS3037 cm3/:0.30Governor Dispersion Governor design. : RSV400...900A7B2088L SLEEVE POSITION Customer-spec. information Control-lever position Customer : JOHN DEERE Degree: LOSE Speed 17min: 800 : 6466 AT-05 Cont.-rod travelmm: 0,3...1,0 Engine TEST BENCH REQUIREMENTS Governor-spring reload Notch setting x : -Calibrating-oil inlet temp. °C : 35...45 FULL-LOAD DELIV. AT FULL-LOAD STOP Overflow valve 1st version : 1 417 413 000 1/min: 890 Speed Del.quantity cm3/: 112,0...124,0 Inlet press., bar : 1.5 HIGHEST RATED SPEED Calibrating nozzle-holder 1st version : 0 681 343 009 assembly Control-lever position degrees: 48...56 Opening pressure, bar : 175 Testing: 1st c-rod trav.mm : 10.3 Speed 1/min : 915...925 2nd c-rod trav.mm : 4,0 Test inj. tubing : 1 680 750 008 1/min : 945...975 Speed 4th speed 1/min: 1030 Outside diameter Wall thickness C-rod trav.mm : 0.3...1.7 : 6,00x2,00x600 x Length mm LOWEST RATED SPEED I Control-lever (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. position degrees: 20...28 Setting point w/out aux. spring per values ____ 1/min : 400 Contr.-rod trav.mm: 5,7 START OF DELIVERY Testing: Prestroke mm : 1,95...2,05 Speed 1/min : 100 Contr.-rod trav.mm: 10,5 C-rod trav.mm min : 19,0 Cam sequence : 1-5-3-6-2-4 Speed 1/min : 400 C-rod trav.mm SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) Remarks:

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                     SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75)
Note inst. in remarks column
Test sheet
                   : CAS 8,3 A4
                    : 7.86
Edition
                                                     SD mark cyl. no. : 1
Superceeded
Calibrating oil : ISO-4113
                                                     BASIC SETTING
                    : 9 400 230 024
Combination no.
                                                                    1/mi: 1100
                                                     1st speed
Injection pump
                                                     Contra-rod trav.mm: 10,8
Pump designation
                   : PES6A100D420LS3024
                                                     Del.quantity cm3/ : 10,8...11,0
Governor
Governor design.
                    : RSV375...1100A2B2089
                                                     Dispersion
                                                                   cm3/:0.30
Customer-spec. information
                                                     2nd speed
                                                                   1/min: 375
                                                     Contr.-rod trav. m: 7,1
Customer
                    : CASE
                                                     Del.quantity cm3/: 1.8...2,4
Dispersion cm3/: 0,30
Engine
                   : A 504 BDT
1st version kW : 121
                                                     SLEEVE POSITION
              1/min: 2200
                                                     Control-lever position
Speed
                                                                  Degree: LOSE
                                                                   17min: 800
TEST BENCH REQUIREMENTS
                                                     Speed
                                                     Cont.-rod travelmm: 0,3...1,0
Calibrating-oil inlet temp. OC
                    : 38...42
                                                     Governor-spring reload
                                                     Notch setting x : -
Overflow valve
                    : 9 681 273 009
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar: 1.5
                                                     1st version
                                                                   1/min: 1190
                                                     Speed
                                                    Del.quantity cm3/: 108.0...110.0
1000H.: (106.0...112.0)
Calibrating nozzle-holder
             : 0 681 343 009
 assembly
                                                    HIGHEST RATED SPEED
Opening
 pressure, bar : 172...175
                                                     1st version
                                                     Control-lever
                                                      position degrees: 50...58
Test inj. tubing : 9 681 230 706
                                                     Testing:
                                                     1st c-rod trav.mm : 9,8
Outside diameter
                                                       Speed 1/min: 1140...1150
x Wall thickness
                   : 6,00x2,00x600
                                                     2nd c-rod trav.mm : 4,0
x Length mm
                                                                 1/min : 1230...1260
                                                       Speed
                                                                 1/min : 1300
(A) Injection pump setting values
                                                     4th speed
    Insp. values in parentheses
Set constant delivery quant.
                                                       C-rod trav.mm : 0.3...1.7
    per values ____
                                                    LOWEST RATED SPEED I
                                                    Control-lever
                                                     position degrees: 26...34
START OF DELIVERY
                                                     Setting point w/out aux. spring
                                                    Speed 1/min : 375
                   : 2,0...2,1
Prestroke mm
: (1,95...2,15)
Contr.-rod trav.mm: 10,5
Cam sequence : 1-5-3-6-2-4
                                                    Contr.-rod trav.mm: 6,5...6,7
                                                     Testing:
                                                                 1/min : 100
                                                     Speed
```

```
C-rod trav.mm min : 19.0
Speed 1/min : 375
               mm : 7,0...7,2

mm : 2,0

1/min : 520...580

1/min : 600
C-rod trav.mm
C-rod trav.mm
Speed
Speed
C-rod trav.mm max: 1,0
TORQUE CONTROL
Torque-control curve - 1st version
              1/min : 1100
1st speed
  C-rod trav.mm : 10,80
2nd speed 1/min: 700
C-rod trav.mm : 11.0...11.30
3rd speed 1/min : 600
  C-rod trav.mm : 11,15...11,25
FUEL-DELIVERY CHARACTERISTICS
               1/min : 700
Speed
Del.quantity cm3/: 104.5...110.5
1000H.: (103,5...111,5)
Speed 1/min: 600
Del.quantity cm3/: 102,5...105,5
1000H.: (98,5...109,5)
```

```
SD ang. spacing ^{\circ} CS: 0-60-120-180-240-300 Tolerance + - ^{\circ} : 0,5(0,75)
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
                                                      SD mark cyl. no. : 1
                    : CAS 8,3 A5
Test sheet
                                                      BASIC SETTING
Edition
                    : 7.86
Superceeded
Calibrating oil
                   : ISO-4113
                                                                   1/mi: 1050
                                                      1st speed
                    : 9 400 230 025
                                                      Contr.-rod trav.mm: 12,05
Combination no.
Injection pump
                                                      Del.quantity cm3/: 11,8...12,0
                    : PES6A100D420LS3024
Pump designation
                                                      Dispersion
                                                                    cm3/: 0.30
Governor
                    : RSV375...1050A2B2090
Governor design
                                                                    1/min: 375
                                                      2nd speed
                                                      Contr.-rod trav. m: 5,85
                                                      Del.quantity cm3/: 1,9...2,5
Dispersion cm3/: 0,30
Customer-spec. information
Customer
                    : CASE
                    : A 504 BDT
                                                      SLEEVE POSITION
Engine
                                                      Control-lever position
                                                                   Degree: LOSE
1/min: 800
TEST BENCH REQUIREMENTS
Calibrating-pil inlet temp. C
                                                      Cont.-rod travelmm: 0,3...1,0
                    : 38...42
                                                      Governor-spring reload
Overflow valve
                                                      Notch setting x:
                    : 9 681 273 009
                                                      FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar : 1.5
                                                      1st version
                                                                    1/min: 1050
Calibrating nozzle-holder
                                                      Speed
                                                     Del.quantity cm3/: 117.5...119.5
1000H.: (115,5...121,5)
                   : 0 681 343 009
 assembly
Opening
 pressure, bar : 172...175
                                                     HIGHEST RATED SPEED
                                                      1st version
                                                      Control-lever
Test inj. tubing
                   : 9 681 230 706
                                                       position degrees: 40,5...48,5
Outside diameter
                                                      Testing:
                                                      1st c-rod trav.mm : 11,05
x Wall thickness
                                                        Speed
                                                                  1/min : 1065...1075
                   : 6,00x2,00x600
x Length mm
                                                      2nd c rod trav.mm : 4.0
Speed 1/min : 1150...1180
(A) Injection pump setting values
                                                        Speed
    Insp. values in parentheses
Set constant delivery quant.
                                                                  1/min : 1260
                                                      4th speed
                                                        C-rod trav.mm : 0,3...1.7
    per values ____
                                                     LOWEST RATED SPEED I
START OF DELIVERY
                                                      Control-lever
                                                       position degrees: 19,5...27,5
                   : 2.0...2,1
: (1.95...2,15)
                                                      Setting point w/out aux. spring
Prestroke mm
                                                                  1/min : 375
Contra-rod trav.mm: 10,5
                                                      Contr.-rod trav.mm: 5,35
Cam sequence : 1-5-3-6-2-4
                                                      Testing:
                                                                   1/min : 100
                                                      Speed
                                                      C-rod trav.mm min : 19,0
                                                                  1/min : 375
                                                      Speed
C26
```

```
C-rod trav.mm : 5.85
C-rod trav.mm : 2.0
Speed 1/min : 565...625
               1/min : 600
Speed
C-rod trav.mm max : 1,0
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1050
C-rod trav.mm : 12,00...12,10
2nd speed 1/min : 700
C-rod trav.mm : 12,15...12,45
3rd speed 1/min : 600
  C-rod trav.mm : 12,25...12,35
FUEL-DELIVERY CHARACTERISTICS
              1/min : 700
Speed
Del.quantity cm3/: 116.5...122.5
1000H.: (115.5...123.5)
Speed 1/min: 600
Del.quantity cm3/: 117,0...120,0
               1000H.: (113,0...124,0)
```

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : CAS 5,5 B3 : 7.86 1st speed 1/mi: 1100 Edition Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 10,35 : 9 400 230 028 Combination no. Del.quantity cm3/: 8,4...8,6 cm3/:0.30Dispersion Injection pump Pump designation : PES4A95D320LS2612 2nd speed 1/min: 425 Contr.-rod trav. m: 7.0 Del.quantity cm3/: 1.4...2.0 Governor : RSV425...1100A2B2109 Governor design. cm3/: 0.30Dispersion Customer-spec. information Customer : CASE SLEEVE POSITION Control-lever position Degree: LOSE : A 336 BDT Engine 17min: 800 Cont.-rod travelmm: 0,3...1,7 TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC Governor-spring reload : 38...42 Notch setting x : -Overflow valve FULL-LOAD DELIV. AT FULL-LOAD STOP : 9 681 273 009 1st version Speed 1/min: 1100 Del.quantity cm3/: 84,0...86,0 Inlet press., bar: 1.5 1000H.: (82,0...88,0) Calibrating nozzle-holder : 0 691 343 009 assembly HIGHEST RATED SPEED Opening 1st version pressure, bar : 172...175 Control-lever position degrees: 49...57 Test inj. tubing : 9 681 230 706 Testing: 1st c-rod trav.mm : 9,35 Speed 1/min : 1140...1150 Outside diameter x Wall thickness 2nd c-rod trav.mm : 4,0 : 6,00x2,00x600 Speed 1/min: 1215...1245 x Length mm LOWEST RATED SPEED I (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Control-lever position degrees: 27...35 per values ____ Setting point w/out aux. spring 1/min : 425 Speed START OF DELIVERY Contr.-rod trav.mm: 6,4...6,6 : 2,15...2,25 : (2,1...2,3) : 1-3-4-2 Prestroke mm Testing: 1/min : 100 Speed C-rod trav.mm min: 19,0 Cam sequence 1/min : 425 C-rod trav.mm : 6,9...7,1 C-rod trav.mm : 2,0 Speed 1/min : 550...610 Speed 1/min : 650 SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75) **C28**

C-rod trav.mm max : 1,0

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 10,30...10,40

2nd speed 1/min : 750

C-rod trav.mm : 11.0...11,30 3rd speed 1/min : 600 C-rod trav.mm : 11,15...11,35

FUEL-DELIVERY CHARACTERISTICS

1/min : 750 Speed

Del.quantity cm3/: 87.0...93.0 1000H: (86.0...94.0) Speed 1/min: 600

Del.quantity cm3/: 43.0...46.0 1000H:: (41.0...48.0)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING : DEE 7,2 F1 Test sheet Edition : 7.86 1st speed 1/mi: 1100 Superceeded : ISO-4113 Calibrating oil Contr.-rod trav.mm: 10,8 Combination no. : 9 400 230 029 Del.quantity cm3/: 10,8...11,0 Injection pump cm3/: 0.30Dispersion : PES6A100D410RS3038 Pump designation Governor 1/min: 400 2nd speed : RSV400...1100A2B2106 Contr.-rod trav. m: 6,6 Governor design. Del.quantity cm3/: 1.3...1.7 Dispersion cm3/: 0.30 Customer-spec, information Customer : JOHN DEERE SLEEVE POSITION Control-lever position : 6466 A Engine Degree: LOSE 17min: 800 TEST BENCH REQUIREMENTS Cont.-rod travelmm: 0,3...1,0 Calibrating-oil inlet temp. °C Governor-spring reload : 38...42 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Overflow valve : 1 417 413 000 1st version Inlet press., bar : 1.5 1/min: 1100 Speed Del.quantity cm3/: 108,0...110,0 1000H.: (106,0...112,0) Calibrating nozzle-holder : 0 681 343 009 assembly HIGHEST RATED SPEED 1st version Opening pressure, bar : 172...175 Control-lever position degrees: 36...44 Testing: Test inj. tubing : 9 681 230 706 1st c-rod trav.mm : 9,8 Speed 1/min : 1145...1155 Outside diameter 2nd c-rod trav.mm: 4.0 Speed 1/min: 1205...1235 4th speed 1/min: 1300 x Wall thickness : 6,00x2,00x600 x Length mm 1/min : 1300 4th speed C-rod trav.mm : 0,3...1,7 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. LOWEST RATED SPEED I per values Control-lever position degrees: 13...21 Setting point w/out aux. spring START OF DELIVERY 1/min : 400 Prestroke mm : 1,95...2,05 Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 Contr.-rod trav.mm: 6,1 Testing: 1/min : 100 Speed C-rod trav.mm min: 19,0 1/min : 400 Speed SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) C-rod trav.mm : 6,6 C-rod trav.mm : 2,0 D02

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1100 C-rod trav.mm: 10.75...10,85 2nd speed 1/min: 650

C-rod trav.mm : 11,75...12,05

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 650

Del.quantity cm3/: 115.5...118.5 1000H.: (112,5...121,5)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing $^{\circ}$ CS: 0-90-180-270 Tolerance + - $^{\circ}$: 0,5(0,75) Note inst. in remarks column Test sheet : CAS 5,5 A1 Edition : 7.86 SD mark cyl. no. : 1 Superceeded Calibrating oil : ISO-4113 BASIC SETTING : 9 400 230 030 Combination no. 1/mi: 1100 1st speed Injection pump Contr.-rod trav.mm: 9,2 Pump designation : PES4A95D420LS3023 Del.quantity cm3/: 9,2...9,4 Governor Governor design. : RSV375...1100A2B2108 cm3/:0.30Dispersion 1/min: 375 Customer-spec. information 2nd speed Contr.-rod trav. m: 5.8
Del.quantity cm3/: 1.8...2,4
Dispersion cm3/: 0,30 Customer : CASE : A 336 BDT Engine 1st version kW : 79 SLEEVE POSITION 1/min: 2200 Speed Control-lever position Degree: LOSE TEST BENCH REQUIREMENTS 17min: 800 Speed Cont.-rod travelmm: 0,3...1,0 Calibrating-oil inlet temp. °C : 38...42 Governor-spring reload Notch setting x : -Overflow valve : 9 681 273 009 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Inlet press., bar : 1.5 1/min: 1100 Speed Del.quantity cm3/: 92,0...94,0 1000H.: (89,0...97,0) Calibrating nozzle-holder : 0 631 343 009 assembly HIGHEST RATED SPEED Opening pressure, bar : 172...175 1st version Control-lever position degrees: 45...53 Test inj. tubing : 9 681 230 706 Testing: 1st c-rod trav.mm : 8,2 Speed 1/min : 1140...1150 Outside diameter x Wall thickness 2nd c-rod trav.mm : 4.0 Speed 1/min : 1180...1210 x Length mm : 6,00x2,00x600 4th speed 1/min : 1250 (A) Injection pump setting values Insp. values in perentheses Set constant delivery quant. C-rod trav.mm : 0,3...1,7 per values LOWEST RATED SPEED I Control-lever START OF DELIVERY position degrees: 20...28 Setting point w/out aux, spring : 2,0...2,1 Speed 1/min : 375 Prestroke mm : (1,95...2,15) Contr.-rod trav.mm: 5,2...5,4 Contr,-rod trav.mm: 10,5 Cam sequence : 1-3-4-2 Testing: Speed 1/min : 100

C-rod trav.mm min: 19.0 Speed 1/min: 375 mm : 5,7...5,9 mm : 2,0 1/min : 470...530 C-rod trav.mm C-rod trav.mm Speed 1/min : 650 Speed C-rod trav.mm max : 1,0 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 9,15...9,25 2nd speed 1/min : 750 C-rod trav.mm : 10,25...10,55 3rd speed 1/min : 600 C-rod trav.mm : 10,45...10,55 FUEL-DELIVERY CHARACTERISTICS 1/min : 750 Speed Del.quantity cm3/: 105,0...111,0 1000H.: (101,0...115,0) 1/min : 600 Speed Del.quantity cm3/: 105.0...107.0 1000H.: (101.0...111.0)

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BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                       SD ang. spacing ^{0}CS: 0-60-120-180-240-300 Tolerance + - ^{0} : 0,5(0,75)
Note inst. in remarks column
                    : CAS 8,3 M
Test sheet
                    : 7.86
Edition
                                                       SD mark cyl. no. : 1
Superceeded
Calibrating oil
                   : ISO-4113
                                                       BASIC SETTING
Combination no.
                    : 9 400 230 031
                                                       1st speed
                                                                      1/mi: 1050
Injection pump
                                                       Contr.-rod trav.mm: 11,0
Pump designation : PES6A95D420LS2461
                                                       Del.quantity cm3/: 10,2...10,3
Governor
                    : RSC375...1050A2B2110
Governor design.
                                                                     cm3/:0.30
                                                       Dispersion
Customer-spec. information
                                                       2nd speed
                                                                     1/min: 375
                                                      Contr.-rod trav. m: 5,8
Del.quantity cm3/: 1,7...2,3
Dispersion cm3/: 0,30
Customer
                    : CASE
                    : A 504 BDT
Engine
1st version kW : 112
                                                       SLEEVE POSITION
                                                       Control-lever position
Speed
              1/min: 2100
                                                                    Degree: LOSE
                                                                     17min: 800
TEST BENCH REQUIREMENTS
                                                       Speed
                                                       Cont.-rod travelmm: 0,3...1,0
Calibrating-oil inlet temp. °C
                    : 38...42
                                                       Governor-spring reload
                                                       Notch setting x : -
Overflow valve
                    : 9 681 273 009
                                                       FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar: 1.5
                                                       1st version
                                                                     1/min: 1050
                                                       Speed
                                                       Del.quantity cm3/: 102,0...103,0
1000H.: (99,0...106,0)
Calibrating nozzle-holder
                   : 0 681 343 009
 assembly
                                                       HIGHEST RATED SPEED
Opening.
 pressure, bar
                   : 172...175
                                                       1st version
                                                       Control-lever
                                                        position degrees: 41...49
Test inj. tubing : 9 681 230 706
                                                       Testing:
                                                       1st c-rod trav.mm : 10.0
Speed 1/min : 1090...1100
Outside diameter
x Wall thickness
                                                       2nd c-rod trav.mm : 4,0
                    : 6,00x2,00x600
x Length mm
                                                                   1/min : 1125...1155
                                                         Speed
                                                                    1/min : 1230
(A) Injection pump setting values
                                                       4th speed
    Insp. values in parentheses
Set constant delivery quant.
                                                         C-rod trav.mm : 0,3...1,7
                                                       LOWEST RATED SPEED I
    per values
                                                       Control-lever
START OF DELIVERY
                                                       position degrees: 16...24
                                                       Setting point w/out aux. spring
Prestroke mm : 2,15...2,25 : (2,1...2,3)
Contr.-rod trav.mm: 10,5
                                                                   1/min : 375
                                                       Contr.-rod trav.mm: 5,3
Cam sequence : 1-5-3-6-2-4
                                                       Testing:
                                                                    1/min : 100
                                                       Speed
```

C-rod trav.mm min: 19.0 Speed 1/min: 375 mm : 5,8 mm : 2,0 1/min : 420...480 C-rod trav.mm C-rod trav.mm Speed 1/min : 600 Speed C-rod trav.mm max : 1,0

TORQUE CONTROL

Torque-control curve - 1st version 1st speed 1/min : 1050

C-rod trav.mm : 10,95...11,05 2nd speed 1/min : 750

C-rod trav.mm : 11,00...11,30 3rd speed 1/min : 650

C-rod trav.mm : 11,10...11,30

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 750
Del.quantity cm3/: 98,5...104,5
1000H.: (96,5...106,5)

```
SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300
Tolerance + - 0,5(0,75)
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
                                                      SD mark cyl. no. : 1
Test sheet
                    : CAS 8,3 I
Edition
                    : 7.86
                                                      BASIC SETTING
Superceeded
Calibrating oil : ISO-4113
                                                      1st speed
                                                                      1/mi: 1050
                    : 9 400 230 033
                                                      Contr.-rod trav.mm: 10,8
Combination no.
                                                      Del.quantity cm3/ : 7,8...8,0
Injection pump
Pump designation : PES6A95D420LS2551
                                                      Dispersion
                                                                     cm3/:0.30
Governor
                    : RSV400...1050A0B2114
Governor design.
                                                                     1/min: 400
                                                      2nd speed
                                                      Contra-rod trav. m: 7,8
Del.quantity cm3/: 1,5...2,1
Dispersion cm3/: 0,30
Customer-spec. information
Customer
                    : CASE
                    : A 504 BD
Engine
                                                      SLEEVE POSITION
                                                      Control-lever position
                                                                    Degree: LOSE
TEST BENCH REQUIREMENTS
                                                                     17min: 800
                                                      Speed
                                                      Cont.-rod travelmm: 0,3...1,0
Calibrating-oil inlet temp. °C
                    : 38...42
                                                      Governor-spring reload
Overflow valve
                                                      Notch setting x : -
                    : 9 681 273 009
                                                      FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar: 1.5
                                                      1st version
Calibrating nozzle-holder
                                                                     1/min: 1050
                                                      Speed
                                                      Del.quantity cm3/: 77,5...79,5
1000H.: (74,5...82,5)
                  : 0 681 343 009
 assembly
Opening
pressure, bar : 172...175
                                                      HIGHEST RATED SPEED
                                                      1st version
                                                      Control-lever
Test inj. tubing : 9 681 230 706
                                                       position degrees: 44...52
Outside diameter x Wall thickness
                                                      Testing:
                                                      1st c-rod trav.mm : 9.8
Speed 1/min : 1090...1100
2nd c-rod trav.mm : 4.0
                 : 6,00x2,00x600
x Length mm
                                                                  1/min : 1210...1240
                                                        Speed
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                      3rd c-rod trav.mm : 2,5
                                                                   1/min : 1255
                                                        Speed
    per values
                                                      4th speed 1/min : 1300
                                                        C-rod trav.mm : 0,3...1,7
START OF DELIVERY
                                                      LOWEST RATED SPEED I
Prestroke mm
                    : 2,2...2,3
                                                      Control-lever
: (2,15...2,35)
Contr.-rod trav.mm: 10,5
                                                       position degrees: 23,5...31,5
                                                      Setting point w/out aux. spring
Cam sequence : 1-5-3-6-2-4
                                                                   1/min : 400
                                                      Contr.-rod trav.mm: 7.7...7.9
                                                      Testing:
                                                                1/min : 100
                                                      Speed
DO8
```

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : CAS 5,5 B2 Edition : 7.86 1st speed 1/mi: 1000 Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 10,5 Combination no. : 9 400 230 035 Del.quantity cm3/: 8,4...8,6 Injection pump Dispersion cm3/:0.35Pump designation : PES4A95D320LS2612 Governor 100H.: (0,60) Governor design. : RSV400...1000A2B2128 2nd speed 1/min: 400 Contr.-rod trav. m: 6,9 Del.quantity cm3/: 1,4...2,0 Dispersion cm3/: 0,30 100H.: (0,55) Customer-spec. information Customer : CASE : A 336 BD Engine SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE Calibrating-oil inlet temp. °C 17min: 800 : 38...42 Cont.-rod travelmm: 0,3...1,0 Overflow valve Governor-spring reload : 9 681 273 009 Notch setting x : -Inlet press., bar : 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder 1st version : 0 681 343 009 assembly Speed 1/min: 1000 Del.quantity cm3/: 84,0...86,0 1000H.: (82,0...88,0) Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 9 681 230 706 Control-lever position degrees: 46...54 Outside diameter Testing: x Wall thickness : 6,00X2,00X600 1st c-rod trav.mm : 9.5 Speed 1/min : 1040...1050 x Length mm 2nd c-rod trav.mm : 4,0 (A) Injection pump setting values Speed 1/min: 1115...1145 4th speed 1/min: 1170 Insp. values in parentheses Set constant delivery quant. C-rod trav.mm : 0,3...1,7 per values LOWEST RATED SPEED I START OF DELIVERY Control-lever : 2,15...2,25 Prestroke mm position degrees: 26,5...34,5 Setting point w/out aux. spring Contr.-rod trav.mm: 10,5 Cam sequence : 1-3-4-2 1/min : 400 Contr.-rod trav.mm: 6,3...6,5 Testing: SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75) 1/min : 100 Speed C-rod trav.mm min: 19,0

Speed 1/min : 400 C-rod trav.mm : 6.0...7.0 C-rod trav.mm : 2.0 Speed 1/min : 550...610 TORQUE CONTROL Torque-control curve - 1st version 1/min : 1000 1st speed C-rod trav.mm : 10,45...10,55 2nd speed 1/min : 750 C-rod trav.mm : 11,00...11,30

C-rod tray.mm : 11,15...11,35

FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 750
Del.quantity cm3/: 87.0...93.0
1000H: (86.0...94.0)
Speed 1/min: 600

3rd speed 1/min : 600

Del.quantity cm3/: 90,0...92,0 1000H:: (87,0...95,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS 270-315 Tolerance + - 0 : 0,5(0,75) Note inst. in remarks column SD mark cyl. no. : IHC 9,0 B Test sheet : 7.86 Edition BASIC SETTING Superceeded : ISO-4113 1/mi: 1400 Calibrating oil 1st speed Combination no. : 9 400 230 037 Contr.-rod trav.mm: 11,8...11,9 Injection pump Del.quantity cm3/: 7,6...7,8 Pump designation : PES8A95D32ORS2620 cm3/:0,35Governor Dispersion Governor design. : RQV325...1400AB1144R 2nd speed 1/min: 350 Contr.-rod trav. m: 7,5...7,7 Del.quantity cm3/: 0,9...1,5 Customer-spec. information Customer : IHC Dispersion cm3/: 0.35 Engine : D9L SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE 17min: 800 Calibrating-oil inlet temp. °C Speed Cont.-rod travelmm: 0,3...1,0 : 38...42 Overflow valve Governor-spring reload : 1 417 413 019 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 2.5 Calibrating nozzle-holder 1st version : 0 681 343 009 assembly Speed 1/min: 1400 Del.quantity cm3/: 76,0...78,0 Opening. pressure, bar : 175 HIGHEST RATED SPEED 1st version Control-lever Test inj. tubing : 1 680 750 008 position degrees: 63,5...68,5 Outside diameter Testing: x Wall thickness 1st c-rod trav.mm: 10,8 : 6,00X2,00X600 Speed 1/min: 1450...1460 x Length mm 2nd c-rod trav.mm : 4.0 Speed 1/min : 1555...1585 4th speed 1/min : 1650 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. C-rod trav.mm : 0...1,0 per values LOWEST RATED SPEED I START OF DELIVERY Control-lever position degrees: 8...16 Prestroke mm : 3,3...3,4 : (3,25...3,45) Contr.-rod trav.mm: 10,5 Cam sequence : 1-8-7-3-6-5-4-2 Setting point w/out aux. spring Speed 1/min: 350 Contr.-rod trav.mm: 7,5...7,7 Testing: 1/min : 100 Speed C-rod trav.mm min : 9,2 SD ang. spacing CS: 0-45-90-135-180-225-C-rod trav.mm : 2,0 1/min : 655...715 Speed

SWITCH-OVER POINT

1/min : 205...265 Speed

FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 840 Del.quantity cm3/: 62,0...64,0

BOSCH INJ. PUMP TEST SPECIFICATIONS 270-315 Tolerance + - 0 : 0,5(0,75) Note inst. in remarks column SD mark cyl. no. : IHC 9,0 E2 Test sheet BASIC SETTING Edition : 7.86 Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1400 : 9 400 230 039 Combination no. Contr.-rod trav.mm: 12.3 Del.quantity cm3/ : 7,7...7,9 Injection pump Pump designation : PES8A95D32ORS2624 Governor Dispersion cm3/:0.30Governor design. : RQV325...1400AB1149-100H.: (0,60) Customer-spec. information 1/min: 325 2nd speed Contr.-rod trav. m: 7,4 Customer : IHC Del.quantity cm3/: 0.9...1.5 Dispersion cm3/: 0.30 100H.: (0,60) : D9L Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: MAX Cont.-rod travelmm: 15,2...17,8 Overflow valve : 1 417 413 019 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 2.5 1st version Speed 1/min: 1400 Del.quantity cm3/: 77,0...79,0 Calibrating nozzle-holder : 0 681 343 009 1000H.: (75,0...81,0) assembly HIGHEST RATED SPEED Opening : 172...175 pressure, bar 1st version Control-lever position degrees: 62...70 Test inj. tubing : 1 680 750 008 Testing: Outside diameter 1st c-rod trav.mm : 11.3 1/min : 1440...1450 x Wall thickness x Length mm : 6,00x2,00x600 2nd c-rod trav.mm : 4,0 1/min : 1545...1575 Speed 1/min : 1640 4th speed (A) Injection pump setting values C-rod trav.mm : 0...1.0 Insp. values in parentheses Set constant delivery quant. LOWEST RATED SPEED I per values Control-lever START OF DELIVERY position degrees: 16...24 Setting point w/out aux. spring Prestroke mm : 2,55...2,65 1/min : 325 : (2,5...2,7) : 1-8-7-3-6-5-4-2 Contr.-rod trav.mm: 7,3...7,5 Cam sequence Testing: 1/min : 100 Speed C-rod trav.mm min: 9,1 C-rod trav.mm : 2.0 Speed 1/min : 630...690 SD ang. spacing CS: 0-45-90-135-180-225-

SWITCH-OVER POINT Speed 1/min: 170...250

FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 800 Del.quantity cm3/: 66,0...69,0 1000H.: (64,0...71,0)

SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : CAS 8,3L Test sheet Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO.4113 1/mi: 1100 1st speed Combination no. : 9 400 230 043 Contr.-rod trav.mm: 11,5 Injection pump Del.quantity cm3/: 10,0...10,2 Pump designation : PES6A95D420LS255i Dispersion cm3/:0,35Governor : RSV375...1100A0B215\$ Governor design. 100H.: (0,60) 1/min: 375 Customer-spec. information 2nd speed Customer : CASE Contri-rod trav. m: 7,2 Del.quantity cm3/: 1,9..2,3 Dispersion cm3/: 0,35 100H:: (0,60) Engine : A-504 BD TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 40...42 Dearee: LOSE 17min: 800 Speed Cont.-rod travelmm: 0,3...1,0 Overflow valve : 9 681 273 009 Governor-spring reload Inlet press., bar : 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Opening. Speed 1/min: 1100 Del.quantity cm3/: 100.0...102.0 1000H:: (98.0...104.0) pressure, bar : 172...175 HIGHEST RATED SPEED Test inj. tubing : 9 681 230 706 1st version Outside diameter Control-lever x Wall thickness position degrees: 47...55 : 6,00x2,00x600 x Length mm Testing: (A) Injection pump setting values 1st e-rod trav.mm : 10,5 Insp. values in parentheses Speed 1/min: 1140...1150 Set constant delivery quant. 2nd c-rod trav.mm : 4,0 per values ____ 1/min : 1200...1230 Speed 3rd c-rod trav.mm : 2,5 Speed 1/min : 1225 START OF DELIVERY 4th speed 1/min : 1300 Prestroke mm : 2,2...2,3 : (2,15...2,35) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 C-rod trav.mm : 0,3...1,7 LOWEST RATED SPEED I Control-lever position degrees: 23...31 Setting point w/out aux. spring 1/min : 375 Contr.-rod trav.mm: 7,1...7,3 D16

Testing:

1/min : 100 Speed C-rod trav.mm min : 19.0 C-rod trav.mm : 2.0 Speed 1/min : 600...660

TORQUE CONTROL

Torque-control curve - 1st version

1/min : 1100 1st speed C-rod trav.mm : 11.5 2nd speed 1/min : 700

C-rod trav.mm : 12,7...12,9

3rd speed 1/min : 600

C-rod trav.mm : 13,0...13,2

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 700
Del.quantity cm3/: 117,5...120,5
1000H.: (115,0...123,0)
Speed 1/min: 600

Del.quantity cm3/: 117.0...120.0 1000H.: (115,0...122,0)

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BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                      SD mark cyl. no. : 1
Note inst. in remarks column
                                                      BASIC SETTING
                    : DEE 7,6 I
Test sheet
                                                      1st speed 1/mi: 1100
Edition
                    : 7.86
Superceeded
                    • -
                                                      Contr.-rod trav.mm: 9,3
Combination no. : 9 400 230 044
                                                      Del.quantity cm3/: 9,80...10.00
Injection pump
Pump designation : PES6A100D410RS3040
                                                                   cm3/:0,30
                                                      Dispersion
Governor
Governor design.
                    : RSV400...1000A2B2160
                                                      2nd speed 1/min: 400
                                                      Contr.-rod trav. m: 5,3
Governor design.
                    : L
                                                     Del.quantity cm3/: 1,20...1,80
Dispersion cm3/: 0,40
Customer-spec. information
                   : JOHN DEERE
Customer
                                                      SLEEVE POSITION
                    : 6466 T
                                                      Control-lever position
Engine
                                                                  Degree: LOSE
1/min: 800
TEST BENCH REQUIREMENTS
                                                      Speed
                                                     Cont.-rod travelmm: 0,3...1,0
Calibrating-oil inlet temp. OC
                    : 38...42
                                                      Governor-spring reload
                                                     Notch setting x : -
Overflow valve
                    : 1 457 413 010
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar : 1.5
                                                     1st version
                                                     Speed
                                                                   1/min: 1100
                                                     Charge press. hPa : 800
Calibrating nozzle-holder
              : 0 681 343 009
                                                     Del.quantity cm3/: 98,0...100,0
 assembly
                                                     HIGHEST RATED SPEED
Opening
 pressure, bar : 175
                                                     1st version
                                                     Control-lever
                                                      position degrees: 45...53
Test inj. tubing : 1 680 750 008
                                                     Testing:
                                                      1st c-rod trav.mm : 8,3
Outside diameter
                                                        Speed 1/min : 1145...1155
x Wall thickness
                                                     2nd c-rod trav.mm : 4.0
Speed 1/min : 1185...1215
4th speed 1/min : 1300
x Length mm
                   : 6,00x2,00x600
(A) Injection pump setting values
                                                       C-rod trav.mm : 0,3...1,7
    Insp. values in parentheses
    Set constant delivery quant.
    per values
                                                     LOWEST RATED SPEED I
                                                     Control-lever
START OF DELIVERY
                                                      position degrees: 20...28
                                                     Setting point w/out aux. spring
Prestroke mm : 1,95...2,05 : (1,9...2,1)
Contr.-rod trav.mm: 10,5
Cam sequence : 1-5-3-6-2-4
                                                     Speed 1/min: 400
                                                     Contr.-rod trav.mm: 4,7...4,9
                                                     Testing:
                                                     Speed
                                                                  1/min : 100
                                                     C-rod trav.mm min : 19,0
                                                     Speed 1/min : 400
SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75)
                                                     C-rod trav.mm : 5,2...5,4
C-rod trav.mm : 2,0
D18
```

1/min : 480...540 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min: 1100 C-rod trav.mm: 9.3 2nd speed 1/min: 750 C-rod trav.mm : 10,6...10,8 compensator (LDA, ADA, ALDA) 1st version Setting 1/min : 500 hPa : 70 Speed Pressure Contr.-rod trav.mm: 9,65...9,75 Measurement 1/min: 500 Speed 1st pressure hPa : 170 C-rod trav.mm : 10,50...10,90 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa: 800 1/min : 750 Speed Del.quantity cm3/: 112,0...118,0 Speed 1/min: 500 Del.quantity cm3/: 84,5...88,5

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : DEE 7,6 C3 Edition : 7.86 1st speed 1/mi: 1100 Superceeded Contr.-rod trav.mm: 9,0 Combination no. : 9 400 230 045 Del.quantity cm3/: 8,7...8,9 Injection pump Pump designation : PES6A95D41ORS2522-1 Dispersion cm3/:0.30Governor Governor design. : RSV425...1100A2B2161 100H.: (0,50) Governor design. 2nd speed 1/min: 425 Contri-rod trav. m: 5,8 Del.quantity cm3/: 1,9...2,3 Customer-spec. information Customer : JOHN DEERE cm3/: 0.30Dispersion : 6466 T 100H.: (0,50) Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Control-lever position Calibrating-oil inlet temp. °C Degree: LOSE 17min: 800 : 38...42 Cont.-rod travelmm: 0,3...1,0 Overflow valve : 1 457 413 010 Governor-spring reload Notch setting x : -Inlet press., bar: 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Speed 1/min: 1100 Charge press. hPa: 600
Del.quantity cm3/: 86,5...88,5
1000H.: (84,5...90,5) Opening pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Quiside diameter Control-lever x Wall thickness position degrees: 48...56 : 6,00X2,00X600 x Length mm Testing: 1st c-rod trav.mm : 8,0 (A) Injection pump setting values Speed 1/min: 1145...1155 2nd c-rod trav.mm: 4.0 Insp. values in parentheses Set constant delivery quant. 1/min : 1185...1215 1/min : 1300 per values ____ Speed 4th speed START OF DELIVERY C-rod trav.mm : 0,3...1,7 Prestroke mm : 1,85...1,95 LOWEST RATED SPEED I : (1,80...2,00) Contr.-rod trav.mm: 10,5 Control-lever position degrees: 24...32 Setting point w/out aux, spring Cam sequence : 1-5-3-6-2-4 1/min : 425 Contr.-rod trav.mm: 5,2...5,4 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) Testing: 1/min : 100 Speed

```
C-rod trav.mm min: 19,0
Speed 1/min: 425
C-rod trav.mm: 5,7...5,9
C-rod trav.mm: 2,0
             1/min : 560...620
Speed
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1100
C-rod trav.mm : 9.0
2nd speed 1/min : 650
  C-rod trav.mm : 10,25...10,55
 compensator (LDA,ADA,ALDA)
1st version
Setting
              1/min : 500
Speed
              hPa : 100
Pressure
Contr.-rod trav.mm: 10,35...10,45
Measurement
Speed
              1/min : 500
1st pressure nPa : 150
  C-rod trav.mm : 10,40...10,80
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 600
              1/min : 650
Del.quantity cm3/: 101,0...107,0
              1000H.: (100,0...108,0)
              1/min : 500
Speed
Del.quantity cm3/: 89.0...93.0
1000H:: (87.0...95.0)
```

```
SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5...0,75
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
                                                         SD mark cyl. no. : 1
                     : DEE 7,6 C4
Test sheet
Edition
                     : 7.86
                                                        BASIC SETTING
Superceeded
                                                                         1/mi: 1100
                                                         1st speed
Combination no. : 9 400 230 045
                                                        Contr.-rod trav.mm: 9,0...9,1
Injection pump
                                                        Del.quantity cm3/: 8,7...8,9
Pump designation
                     : PES6A95D410RS2522-1
Governor
Governor design.
                                                                       100H.: (8,4...9,0)
                     : RSV425...1100A2C2161
Governor design.
                                                                       cm3/:0,35
                                                        Dispersion
Customer-spec. information
Customer
                     : JOHN DEERE
                                                                       100H.: (0,60)
                                                        2nd speed 1/min: 425
Contr.-rod trav. m: 5,5...5,7
Del.quantity cm3/: 1,8...2,2
Engine
                     : 6466 T
TEST BENCH REQUIREMENTS
                                                                       100H.: (1,6...2,5)
cm3/: 0,35
Calibrating-oil inlet temp. °C
                                                        Dispersion
                     : 38...42
                                                                       100H.: (0,55)
Overflow valve
                                                        SLEEVE POSITION
                     : 1 457 413 010
                                                        Control-lever position
                                                                      Degree: LOSE
1/min: 800
Inlet press., bar: 1.5
                                                        Speed
                                                        Cont.-rod travelmm: 0,3...0,7
Calibrating nozzle-holder
                : 0 681 343 009
 assembly
                                                        Governor-spring reload
                                                        Notch setting x : -
Opening
 pressure, bar : 172...175
                                                        FULL-LOAD DELIV. AT FULL-LOAD STOP
                                                        1st version
                                                                       1/min: 1100
Test inj. tubing : 4 681 271 001
                                                        Speed
                                                        Charge press. hPa : 600
                                                        Del.quantity cm3/: 86.5...88.5
1000H: (84.0...90.0)
Dispersion cm3/: 3.5
Outside diameter
x Wall thickness
x Length mm
                     : 6,00x2,00x600
                                                                      1000H.: (6.0)
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                        HIGHEST RATED SPEED
                                                        1st version
    per values ____
                                                        Control-lever
                                                         position degrees: 46...54
START OF DELIVERY
Test pressure, bar: 27...29
                                                        Testing:
                                                        1st c-rod trav.mm : 8,0
                                                                      1/min: 1145...1155
Prestroke mm
                     : 1,85...1,95
                                                          Speed
: (1,80...2,00)
Contr.-rod trav.mm: 10,5
Cam sequence : 1-5-3-6-2-4
                                                        2nd c-rod trav.mm : 4.0
Speed 1/min : 1175...1205
                                                                      1/min : 1300
                                                        4th speed
                                                          C-rod trav.mm : 0,3...1,4
                                                        LOWEST RATED SPEED I
                                                        Control-lever
```

```
position degrees: 21...29
Setting point w/out aux. spring
Speed
             1/min : 425
Contr.-rod trav.mm: 5,0...5,2
             1/min : 425
Speed
             nm : 5,5...5,7
nm : 2,0
1/min : 590...650
C-rod trav.mm
C-rod trav.mm
Speed
TORQUE CONTROL
Torque-control curve - 1st version
             1/min : 1100
1st speed
C-rod trav.mm : 9.0...9,1
2nd speed 1/min : 650
  C-rod trav.mm : 10,4...10,6
 compensator (LDA,ADA,ALDA)
1st version
Setting
             1/min : 500
Speed
Pressure
             hPa
                  : 147
Contr.-rod trav.mm: 10,55...10,65
Measurement
             1/min : 500
Speed
1st pressure hPa : 100
  C-rod trav.mm : 19,2...10,6
  C-rod trav.mm : 10,2...10,4
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 600
Speed 1/min : 650
             1/min : 650
Del.quantity cm3/: 102,5...105,5
             1000H.: (100,0...108,0)
             1/min : 500
Speed
Del.quantity cm3/: - 1000H.: (87,0...95,0)
Remarks:
```

SD ang. spacing CS: 0-60-120~180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column BASIC SETTING Test sheet : DEE 7,6 J Edition : 7.86 1/mi: 1100 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 10,7 Combination no. : 9 400 230 047 Del.quantity cm3/: 10,7...10,9 Dispersion cm3/: 0,30 Injection pump Pump designation : PES6A95D410RS2561 2nd speed 1/min: 600 Governor Contr.-rod trav. m: 5,1 : RSV600...1100A2B2049 Governor design. Del.quantity cm3/: 1,2...1,6 Dispersion cm3/: 0,30 -1L Customer-spec. information : JOHN DEERE Customer SLEEVE POSITION Control-lever position Engine : 6466 T Degree: LOSE 1/min: 800 TEST BENCH REQUIREMENTS Cont.-rod travelmm: 0,3...1,0 Calibrating-oil inlet temp. OC Governor-spring reload : 38...42 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Overflow valve : 1 413 385 007 1st version 1/min: 1100 Inlet press., bar: 1.5 Speed Del.quantity cm3/: 107,0... 09,0 1000H.: (104,0...112,0) Calibrating nozzle-holder : 0 681 343 009 assembly HIGHEST RATED SPEED Opening 1st version pressure, bar : 175 Control-lever position degrees: 44...52 Test inj. tubing : 1 680 750 008 Testing: 1st c-rod trav.mm : 9.7 Speed 1/min : 1145...1155 Outside diameter x Wall thickness 2nd c-rod trav.mm: 4,0 Speed 1/min: 1200...1230 : 6,35x1,675x600 x Length mm 4th speed 1/min: 1300 C-rod trav.mm : 0.3...1.7 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. LOWEST RATED SPEED I per values ____ Control-lever position degrees: 25...33 Setting point w/out aux. spring START OF DELIVERY Speed 1/min : 600 Prestroke mm Contr.-rod trav.mm: 4,5...4,7 : 1,85...1,95 : (1,80...2,00) Contr.-rod trav.mm: 10.5 Cam sequence : 1-5-3-6-2-4 Testing: Speed 1/min: 100 C-rod trav.mm min: 19.0 Speed 1/min : 600 C-rod trav.mm : 5,0...5,2 C-rod trav.mm : 2,0

Speed 1/min : 720...789 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min: 1100 C-rod trav.mm: 10,7 2nd speed 1/min: 950 C-rod trav.mm: 1145...1165

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 950 Del.quantity cm3/: 120,0...124,0 1000H.: (118,0...126,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column Test sheet : CAS 8,3 G5 Edition : 7.86 Superceeded Calibrating oil : ISO-4113 : 9 400 230 049 Gombination no. Injection pump Pump designation : PES6A95D32OLS2647 Governor Governor design. : RSV400...1050A0B2034 -1R Customer-spec. information Customer : CASE : A 504 BDT Engine TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. C : 38...42 Overflow valve : 9 681 273 009 Inlet press., bar : 1.5 Calibrating nozzle-holder assembly : 0 681 343 009 Opening pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 Outside diameter x Wall thickness x Length mm : 6,00x2,00x600 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values START OF DELIVERY Prestroke mm : 2,95...3,05 Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75)

BASIC SETTING 1/mi: 1050 1st speed Contr.-rod trav.mm: 9.5 Del.quantity cm3/: 9,5...9,7 Dispersion cm3/:0.30100H.: (0,60) 2nd speed 1/min: 400 Contr.-rod trav. m: 5.2 Del.quartity cm3/: 1.8...2,4 Dispersion cm3/: 0.30 100H.: (0,55) SLEEVE POSITION Control-lever position Degree: LOSE 17min: 800 Speed Cont.-rod travelmm: 0.3...1.0 Governor-spring reload Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version 1/min: 1050 Speed Del.quantity cm3/: 95.0...97.0 1000H.: (93.0...99.0) HIGHEST RATED SPEED 1st version Control-lever position degrees: 36...44 Testing: 1st c-rod trav.mm : 8.5 Speed 1/min : 1080...1100 2nd c-rod trav.mm: 4,0 1/min : 1165...1185 Speed 3rd c-rod trav.mm : 2,5 1/min : 1190...1210 Speed 4th speed 1/min : 1300 C-rod trav.mm : 0,3...1,7 LOWEST RATED SPEED I Control-lever position degrees: 21...29 Setting point w/out aux. spring 1/min : 400 Contr.-rod trav.mm: 5,1,,,53

Testing:

Speed 1/min : 100 C-rod trav.mm min : 19,0 C-rod trav.mm : 2,0 1/min : 585...645 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1050 C-rod trav.mm: 9,5 2nd speed 1/min: 750 C-rod trav.mm: 10,00...10,30 3rd speed 1/min: 600

C-rod trav.mm : 10,10...10,20

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 750

Del.quantity cm3/: 101.0...107.0

1000H.: (100.0...108.0)

Speed 1/min: 600

Del.quantity cm3/: 100,0...102,0 1000H.: (98,0...106,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 BASIC SETTING Note inst. in remarks column Test sheet : CAS 5,5 B4 1st speed 1/mi: 1100 Edition : 7.86 Superceeded Contr.-rod trav.mm: 10,4 Calibrating oil : ISO-4113 Del.quantity cm3/: 8,8...9,0 : 9 400 230 050 Combination no. Dispersion cm3/:0.30Injection pump Pump designation : PES4A95D32OLS2612 100H.: (0,60) Governor Governor design. : RSV375...1100A0B2167 1/min: 375 2nd speed Contri-rod trav. m: 7,1 Del.quantity cm3/: 1,5...2,1 Dispersion cm3/: 0,30 Customer-spec. information Customer : CASE 100H.: (0,55) : A 336 BD Engine SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE 17min: 800 Calibrating-oil inlet temp. OC : 38...42 Cont.-rod travelmm: 0,3...1,0 Overflow valve Governor-spring reload : 9 681 273 009 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.5 1st version Calibrating nozzle-holder : 0 681 343 009 1/min: 1100 assembly Speed Del.quantity cm3/: 88,0...90,0 1000H.: (86,0...92,0) Opening. pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 9 681 230 706 Control-lever position degrees: 39...47 Outside diameter x Wall thickness Testing: 1st c-rod trav.mm : 9,4 Speed 1/min : 1130...1150 x Length mm : 6,00x2,00x600 Speed 1/min: 1210...1230

3rd c-rod trav.mm: 2.5

Speed 1/min: 1240...1250

4th speed 1/min: 1350 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____ START OF DELIVERY C-rod trav.mm : 0,3...1.7 Prestroke mm : 2,15...2,25 LOWEST RATED SPEED I Contr.-rod trav.mm: 10,5 Cam sequence : 1-3-4-2 Control-lever position degrees: 22...30 Setting point w/out aux. spring Speed 1/min : 375 Contr.-rod trav.mm: 7,0...7,2 SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75) Testing: Speed 1/min : 100

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING : CAS 8,3 K3 Test sheet 1/mi: 1050 1st speed Edition : 7.86 Superceeded Contr.-rod trav.mm: 10,65 Calibrating oil : ISO.4113 Del.quantity cm3/: 8,2...8,4 Combination no. : 9 400 230 052 cm3/:0.30Dispersion Injection pump Pump designation : PES6A95D420LS2551 100H.: (0,60) Governor Governor design. : RSV375...1050A0B2170 2nd speed 1/min: 375 Contri-rod trav. m: 7,6 Del.quantity cm3/: 1,7...2,3 Dispersion cm3/: 0,30 Customer-spec. information Customer : CASE 100H.: (0,55) : A 504 BDT Engine SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE Calibrating-cilinlet temp. °C 17min: 800 Speed : 38...42 Cont.-rod travelmm: 0,3...1,0 Overflow valve Governor-spring reload : 0 681 273 009 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 1.5 Calibrating nozzle-holder 1st version : 0 681 343 009 assembly Speed 1/min: 1050 Del.quantity cm3/: 81.5...83.5 1000H:: (79.5...85.5) Opening pressure, bar : 175 HIGHEST RATED SPEED 1st version Test inj. tubing : 0 681 273 706 Control-lever position degrees: 36...44 Outside diameter Testing: x Wall thickness x Length mm : 6,00x2,00x600 1st c-rod trav.mm : 9,65 Speed 1/min: 1090...1100 2nd c-rod trav.mm : 4.0 Speed 1/min : 1235...1265 4th speed 1/min : 1300 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. C-rod trav.mm : 0,3...1,7 per values ____ START OF DELIVERY LOWEST RATED SPEED I Control-lever Prestroke mm : 2,15...2,25 Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 position degrees: 21...29 Setting point w/out aux. spring Speed 1/min: 375 Contr.-rod trav.mm; 7,0...7,2 Testing: SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) 1/min : 100 Speed C-rod trav.mm min : 19,0 1/min : 375 Speed

C-rod trav.mm : 7,5...7,7 C-rod trav.mm : 2,0 Speed 1/min : 690...750 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1050 C-rod trav.mm : 10,65 2nd speed 1/min : 700 C-rod trav.mm : 10,95...11,25 3rd speed 1/min : 600

C-rod trav.mm : 11,15...11,25 FUEL-DELIVERY CHARACTERISTICS

1/min : 700 Speed Del.quantity cm3/: 78.5...82.5 1000H: (76.5...84.5) Speed 1/min : 600

Del.quantity cm3/: 81,5...83,5 1000H:: (77,5...87,5)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : CAS 5,5 C Edition : 7.86 1/mi: 1100 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 11,05 Del.quantity cm3/: 11,8...12,0 Combination no. : 9 400 230 053 cm3/:0,30Injection pump Dispersion Pump designation : PES4A95D32OLS2649 100H.: (0,60) Governor Governor design. : R\$V425...1100A2B2109 1/min: 425 -1R 2nd speed Contr.-rod trav. m: 5,2
Del.quantity cm3/: 1,8...2,4
Dispersion cm3/: 0,30
100H.: (0,55) Customer-spec. information Customer : CASE : A 336 BDT Engine SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE Calibrating-oil inlet temp. OC 17min: 800 Speed : 38...42 Cont.-rod travelmm: 0,3...1,0 Overflow valve Governor-spring reload : 9 681 273 009 Notch setting x: -Inlet press., bar: 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder 1st version : 0 681 343 009 assembly Speed 1/min: 1100 Del.quantity cm3/: 117,5...119,5 1000H.: (115,5...121,5) Opening. pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 9 681 230 706 Control-lever position degrees: 41...49 Outside diameter x Wall thickness Testing: 1st c-rod trav.mm: 10,05 : 6,00x2,00x600 x Length mm Speed 1/min: 1130...1150 2nd c-rod trav.mm : 4.0 Speed 1/min : 1215...1235 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 3rd c-rod trav.mm : 2,5 Speed 1/min: 1245...1255 4th speed 1/min: 1300 per values ____ C-rod trav.mm : 0,3...1,7 START OF DELIVERY Prestroke mm : 2,95...3,05 Contr.-rod trav.mm: 10,5 Cam sequence : 1-3-4-2 LOWEST RATED SPEED I Control-lever position degrees: 19...27 Setting point w/out aux. spring 1/min : 425 Contr.-rod trav.mm: 5.2 St ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75) Testing:

E04

1/min : 100 Speed* C-rod trav.mm min : 19.0 C-rod trav.mm : 2.0 Speed 1/min : 540...600 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 11.05 2nd speed 1/min : 750 C-rod trav.mm : 11,25...11,55 3rd speed 1/min : 600 C-rod trav.mm : 11,45...11,55 FUEL-DELIVERY CHARACTERISTICS 1/min : 750

Del.quantity cm3/: 119,0...125,0 1000H.: (118,0...126,0)

Speed 1/min: 600
Del.quantity cm3/: 121.0...123.0
1000H.: (117,0...127,0)

```
SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75)
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
                                                        SD mark cyl. no. : 1
Test sheet
                     : CAS 8,3 K
Edition
                     : 7.86
                                                        BASIC SETTING
Superceeded
Calibrating oil : ISO.4113
                                                        1st speed
                                                                      1/mi: 1100
Combination no. : 9 400 230 053
                                                        Contr.-rod trav.mm: 10,65
                                                        Del.quantity cm3/: 8,2...8,4
Injection pump
Pump designation : PES6A95D420LS2551
                                                                       cm3/:0.30
Governor
                                                        Dispersion
                   : RSV375...1100A0B2170
Governor design.
                                                                       100H.: (0,60)
Customer-spec. information
                                                        2nd speed
                                                                       1/min: 375
                                                        Contri-rod trav. m: 7,7
Customer
                     : CASE
                                                        Del.quantity cm3/: 1,7...2,3
Dispersion cm3/: 0,30
100H.: (0,55)
                     : A 504 BD
Engine
TEST BENCH REQUIREMENTS
                                                        SLEEVE POSITION
Calibrating-oil inlet temp. OC
                                                        Control-lever position
                   : 38...42
                                                                      Degree: LOSE
                                                                       17min: 800
                                                        Speed
                                                        Cont.-rod travelmm: 0,3...1,0
Overflow valve
                     : 9 681 273 009
                                                        Governor-spring reload
Inlet press., bar: 1.5
                                                        Notch setting x : -
Calibrating nozzle-holder
                                                        FULL-LOAD DELIV. AT FULL-LOAD STOP
 assembly
                 : 0 681 343 009
                                                        1st version
                                                        Speed 1/min: 1100
Del.quantity cm3/: 81.5...83.5
1000H.: (79,5...85,5)
Opening
 pressure, bar : 175
Test inj. tubing : 9 681 230 706
                                                        HIGHEST RATED SPEED
                                                        1st version
                                                        Control-lever
Outside diameter
x Wall thickness
                                                         position degrees: 36...44
                : 6,00x2,00x600
x Length mm
                                                        Testing:
                                                        1st c-rod trav.mm : 9,65
Speed 1/min : 1140...1150
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                        2nd c-rod trav.mm : 4,0
                                                        Speed 1/min: 1250...1280
4th speed 1/min: 1350
C-rod trav.mm: 0,3...1,7
    per values ____
START OF DELIVERY
Prestroke mm : 2,2,..2,3 : (2,15...2,35)
Contr.-rod trav.mm: 10,5
                                                        LOWEST RATED SPEED I
                                                        Control-lever
                                                         position degrees: 19...27
                                                        Setting point w/out aux. spring
Cam sequence : 1-5-3-6-2-4
                                                        Speed 1/min: 375
Contr.-rod trav.mm: 7,1...7,3
                                                        Testing:
E06
```

1/min : 100 Speed C-rod trav.mm min: 19,0

Speed 1/min: 375

C-rod trav.mm : 7,6...7,8

C-rod trav.mm : 2,0 1/min : 690...730 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 10,65 2nd speed 1/min: 800 C-rod trav.mm : 10,90...11,30 3rd speed 1/min : 600 C-rod trav.mm : 11,20...11,30 FUEL-DELIVERY CHARACTERISTICS Speed 1/min : 800 Del.quantity cm3/: 81.0..85.0 1000H: (79.0..87.0) Speed 1/min: 600 Del.quantity cm3/: 82.0..84.0 1000H: (80.0..88.0)

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                       BASIC SETTING
Note inst. in remarks column
                                                                      1/mi: 1100
                                                       1st speed
                    : CAS 8,3 G
: 7.86
Test sheet
Edition
                                                       Contr.-rod trav.mm: 12,3
Superceeded
Calibrating oil : ISO-4113
                                                       Del.quantity cm3/ : 13,5...13,7
                    : 9 400 230 054
Combination no.
                                                      Dispersion
                                                                     cm3/:0,30
Injection pump
                                                                     100H.: (0,60)
                    : PES6A95D32OLS2647
Pump designation
                                                      2nd speed 1/min: 375
Contr.-rod trav. m: 5.3
Del.quantity cm3/: 1.5...2.1
Dispersion cm3/: 0.30
Governor
                    : RSV375...1100A2B2034
Governor design.
Customer-spec. information
                                                                     100H.: (0.55)
Customer
                    : CASE
                                                       SLEEVE POSITION
                    : A 504 BDT
                                                      Control-lever position
Engine
                                                                    Degree: LOSE
TEST BENCH REQUIREMENTS
                                                                     17min: 800
                                                       Speed
                                                       Cont.-rod travelmm: 0.3...1.0
Calibrating-oil inlet temp. °C
                    : 38...42
                                                       Governor-spring reload
                                                      Notch setting x : -
Overflow valve
                    : 9 681 273 009
                                                      FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar : 1.5
                                                       1st version
                                                      Speed
                                                                     1/min: 1100
                                                      Del.quantity cm3/: 134,5...136,5
Calibrating nozzle-holder
 assembly
                   : 0 681 343 009
                                                                    1000H.: (132,5...138,5)
                                                                    cm3/:3.0
                                                      Dispersion
                                                                    1000H.: (6.0)
Opening
 pressure, bar
                   : 172...175
                                                      HIGHEST RATED SPEED
                                                      1st version
                                                      Control-lever
Test inj. tubing
                   : 9 681 230 706
                                                       position degrees: 49...57
Outside diameter
x Wall thickness
                                                      Testing:
                                                      1st c-rod trav.mm : 11.3
Speed 1/min : 1140...1150
x Length mm
                   : 6,00x2,00x600
                                                      2nd c-rod trav.mm : 4,0
(A) Injection pump setting values
    Insp. values in parentheses
                                                         Speed 1/min: 1210...1240
    Set constant delivery quant.
                                                       3rd c-rod trav.mm : 2,5
    per values ____
                                                                   1/min : 1250
                                                         Speed
                                                       4th speed 1/min: 1300
                                                         C-rod trav.mm : 0,3...1.7
START OF DELIVERY
Prestroke mm : 2,75...2,85
Contr.-rod trav.mm: 10,5
Cam sequence : 1-5-3-6-2-4
                                                      LOWEST RATED SPEED I
                                                      Control-lever
                                                       position degrees: 23...31
                                                      Setting point w/out aux. spring
                                                                   1/min : 375
                                                      Contr.-rod trav.mm: 5,2...5,4
SD ang. spacing ^{0}CS: 0-60-120-180-240-300 Tolerance + - ^{0}: 0,5(0,75)
                                                      Testing:
E08
```

Speed 1/min : 100 C-rod trav.mm min : 19.0 C-rod trav.mm : 2.0 Speed 1/min : 520...580

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1100
C-rod trav.mm: 12,3
2nd speed 1/min: 800

C-rod trav.mm : 12,45...12,75 3rd speed 1/min : 600

C-rod trav.mm : 12,65...12,75

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 800 Del.quantity cm3/: 134,5...140,5 1000H:: (133,5...141,5)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : CAS 8,3 G1 : 7.86 1/mi: 1050 Edition 1st speed Superceeded : ISO-4113 Calibrating oil Contr.-rod trav.mm: 12,9 : 9 400 230 055 Del.quantity cm3/: 14,2...14,4 Combination no. cm3/:0,30Injection pump Dispersion Pump designation : PES6A95D32OLS2647 100H.: (0,60) Governor : RSV375...1050A2B2034 Governor design. 1/min: 375 2nd speed Contr.-rod trav. m: 5.6
Del.quantity cm3/: 1.7...2,3
Dispersion cm3/: 0.30 Customer-spec. information Customer : CASE 100H.: (0,55) : A 504 BDT Engine SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE Calibrating-oil inlet temp. ^DC 17min: 800 Speed : 38...42 Cont.-rod travelmm: 0.3...1.0 Governor-spring reload Overflow valve : 9 681 273 009 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 1.5 Calibrating nozzle-holder 1st version Speed 1/min: 1050 Del.quantity cm3/: 141,5...143.5 1000H.: (139.5...145,5) : 0 681 343 009 assembly Opening. pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 9 681 230 706 Control-lever position degrees: 46...54 Outside diameter x Wall thickness Testing: 1st c-rod trav.mm : 11.9 Speed 1/min : 1090...1100 : 6,00x2,00x600 x Length mm 2nd c-rod trav.mm : 4,0 (A) Injection pump setting values Speed 1/min: 1160...1190 Insp. values in parentheses Set constant delivery quant. 3rd c-rod trav.mm : 2.5 Speed 1/min : 1200 4th speed 1/min : 1250 per values ____ C-rod trav.mm : 0.3...1.7 START OF DELIVERY LOWEST RATED SPEED I Prestroke mm : 2,55...2,65 Contr.-rod trav.mm: 10.5 Cam sequence : 1-5-3-6-2-4 Control-lever position degrees: 22...30 Setting point w/out aux. spring 1/min : 375 Contr.-rod trav.mm: 5,5...5,7 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) Testing:

E10

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1050
C-rod trav.mm: 12,9
2nd speed 1/min: 750
C-rod trav.mm: 13,55...13,85
3rd speed 1/min: 600

C-rod trav.mm : 13,65...13,75

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 750
Del.quantity cm3/: 145,0...151,0
1000H.: (144,0...152,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : CAS 8,3 G4 Edition : 7.86 1/mi: 1050 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 11.8 Combination no. : 9 400 230 056 Del.quantity cm3/: 12,8...13,0 Injection pump cm3/:0.30Dispersion Pump designation : PES6A95D320LS2647 100H.: (0,60) Governor : RSV375...1050A2B2034 Governor design. 2nd speed 1/min: 375 Contri-rod trav. m: 5.0 Del.quantity cm3/: 1,4...2,0 Dispersion cm3/: 0,30 100H.: (0,60) Customer-spec. information Customer : CASE Engine : A 504 BDT SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE Calibrating-oil inlet temp. OC 17min: 800 Speed : 38...42 Cont.-rod travelmm: 0.3...1.0 Overflow valve Governor-spring reload : 9 681 273 009 Notch setting x: Inlet press., bar : 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder 1st version assembly : 0 681 343 009 Speed 1/min: 1050 Del.quantity cm3/: 127.5...129.5 1000H.: (125.5...131.5) Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 9 681 230 706 Control-lever position degrees: 40...48 Outside diameter x Wall thickness Testing: : 6,00x2,00x600 1st c-rod trav.mm: 10.8 x Length mm Speed 1/min: 1080...1100 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 3rd c-rod trav.mm : 2,5 1/min : 1200 per values ____ Speed 5th speed 1/min: 1250 START OF DELIVERY C-rod trav.mm : 0,3...1,7 Prestroke mm : 2,75...2,85 Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever position degrees: 18...26 Setting point w/out aux. spring 1/min : 375 Contr.-rod trav.mm: 4,9...5,1 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) Testing:

E12

Speed 1/min : 100 C-rod trav.mm min : 19.0 C-rod trav.mm : 2.0 Speed 1/min : 510...570

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1100 C-rod trav.mm: 11.8 2nd speed 1/min: 750

C-rod trav.mm : 11,95...12,25

3rd speed 1/min: 600 C-rod trav.mm: 12,15...12,25

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 750
Del.quantity cm3/: 128.0...134.0
1000H.: (127,0...135,0)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : CAS 8,3 H : 7.86 Edition BASIC SETTING Superceeded : ISO-4113 Calibrating oil 1/mi: 1100 1st speed Combination no. : 9 400 230 058 Contr.-rod trav.mm: 9.8 Injection pump Del.quantity cm3/: 10,3...10,5 Pump designation : PES6A95D32OLS2647 cm3/: 0.35Governor Dispersion Governor design. : RSV400...1100A2B2172 100H.: (0,60) 1/min: 400 Customer-spec. information 2nd speed Contr.-rod trav. m: 5,2 Customer : CASE Del.quantity cm3/: 1,8...2,2 : A 504 BDT cm3/: 0.35Engine Dispersion 100H.: (0.55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. C Control-lever position Degree: LOSE 1/min: 800 : 38...42 Overflow valve Cont.-rod travelmm: 0,3...1,0 : 9 681 273 009 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version 1/min: 1100 Opening Speed Del.quantity cm3/: 102,5...104,5 pressure, bar : 175 1000H.: (100,5...106,5) Test inj. tubing : 9 681 250 706 HIGHEST RATED SPEED 1st version Control-lever Outside diameter x Wall thickness position degrees: 46...54 : 6,00x2,00x600 x Length mm Testing: (A) Injection pump setting values 1st c-rod trav.mm : 8,8 1/min : 1140...1150 Insp. values in parentheses Speed Set constant delivery quant. 2nd c-rod trav.mm : 4,0 1/min : 1185...1215 per values ____ Speed 4th speed 1/min: 1300 C-rod trav.mm : 0,3...1,7 START OF DELIVERY : 2,95...3,05 : (2,85...3,15) Prestroke mm LOWEST RATED SPEED I Control-lever Contr.-rod trav.mm: 10,5 position degrees: 20...28 Cam sequence : 1-5-3-6-2-4 Setting point w/out aux. spring 1/min : 400 Contr.-rod trav.mm: 4,6...4,8 Testing:

Speed 1/min : 100 C-rod trav.mm min : 19,0 Speed 1/min : 400 C-rod trav.mm : 5,1...5,3 C-rod trav.mm : 2,0 Speed 1/min : 560...620 TORQUE CONTROL 1/min : 1100 1st speed

Torque-control curve - 1st version

C-rod trav.mm : 9,8
2nd speed 1/min : 750
C-rod trav.mm : 10,55...10,75
3rd speed 1/min : 600

C-rod trav.mm : 10,95...11,05

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 750

Del.quantity cm3/: 110.0...114.0 1000H.: (108.5...116.5)

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BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                    SD mark cyl. no. : 1
Note inst. in remarks column
                                                    BASIC SETTING
Test sheet
                   : CAS 8,3 G2
                                                    1st speed 1/mi: 1050
Edition
                   : 7.86
Superceeded
Calibrating oil : ISO-4113
                                                    Contr.-rod trav.mm: 10,5
                                                    Del.quantity cm3/: 11,0...11,2
Combination no. : 9 400 230 059
                                                                  cm3/:0.30
                                                    Dispersion
Injection pump
Pump designation : PES6A95D320LS2647
Governor
                                                                  100H.: (0,60)
Governor design. : RSV375...1050A0B2034
                                                                  1/min: 375
                                                    2nd speed
                                                    Contr.-rod trav. m: 5,2
                                                    Del.quantity cm3/: 1,5...2,1
Dispersion cm3/: 0,30
Customer-spec. information
Customer
                   : CASE
                                                                  100H.: (0,60)
Engine
                   : A 504 BDT
                                                    SLEEVE POSITION
TEST BENCH REQUIREMENTS
                                                    Control-lever position
                                                                 Degree: LOSE
Calibrating-oil inlet temp. OC
                                                                  17min: 800
                                                    Speed
                  : 38...42
                                                    Cont.-rod travelmm: 0,3...1,0
                                                    Governor-spring reload
Overflow valve
                   : 9 681 273 009
                                                    Notch setting x : -
Inlet press., bar: 1.5
                                                    FULL-LOAD DELIY. AT FULL-LOAD STOP
Calibrating nozzle-holder
                                                    1st version
               : 0 681 343 009
 assembly
                                                    Speed
                                                                  1/min: 1050
                                                    Del.quantity cm3/: 109,5...111,5
1000H.: (107,5...113,5)
Opening
pressure, bar : 172...175
                                                    HIGHEST RATED SPEED
                                                    1st version
Test inj. tubing : 9 681 230 706
                                                    Control-lever
                                                     position degrees: 33,5...41,5
Outside diameter
* Wall thickness
                                                    Testing:
                                                    1st c-rod trav.mm : 9.5
Speed 1/min : 1080...1100
               : 6,00x2,00x600
x Length mm
                                                    2nd c-rod trav.mm : 4,0
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                      Speed 1/min: 1165...1185
                                                    3rd c-rod trav.mm : 2,5
                                                      Speed
                                                              1/min : 1200
    per values ____
                                                    4th speed 1/min: 1250
                                                      C-rod trav.mm : 0,3...1,7.
START OF DELIVERY
Prestroke mm : 2,95...3,05
Contr.-rod trav.mm: 10,5
                                                    LOWEST RATED SPEED I
                                                    Control-lever
Cam sequence : 1-5-3-6-2-4
                                                     position degrees: 17,5...25,5
                                                    Setting point w/out aux. spring
                                                                1/min : 375
                                                    Contr.-rod trav.mm: 5,1...5,3
SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75)
                                                    Testing:
E16
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Speed 1/min: 100
C-rod trav.mm min: 19,0
C-rod trav.mm: 2,0
Speed 1/min: 535...595

TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min: 1050
C-rod trav.mm: 10,5
2nd speed 1/min: 750
C-rod trav.mm: 11,05...11,35
3rd speed 1/min: 600
C-rod trav.mm: 11,35...11,45

FUEL DELIVERY CHARACTERISTICS
Speed 1/min: 750
Del.quantity cm3/: 114,0...120,0
1000H.: (113,0...121,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : CAS 8,3 G3 Edition : 7.86 1st speed 1/mi: 1050 Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 12.35 Combination no. : 9 400 230 060 Del.quantity cm3/: 13,5...13,7 cm3/:0.30Injection pump Dispersion Pump designation : PES6A95D32OLS2547 100H.: (0,60) Governor Governor design. : RSV375...1050A0B2034 1/min: 375 2nd speed Contr.-rod trav. m: 5.0
Del.quantity cm3/: 1.4...2.0
Dispersion cm3/: 0.30 Customer-spec. information Customer : CASE 100H.: (0,55) Engine : A 504 BTD SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE Calibrating-oil inlet temp. °C 17min: 800 Speed : 38...42 Cont.-rod travelmm: 0.3...1.0 Overflow valve Governor-spring reload : 9 681 273 009 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 1.5 Calibrating nozzle-holder 1st version : 0 681 343 009 1/min: 1050 assembly Speed Del.quantity cm3/: 135,0...137,0 1000H.: (133,0...139,0) Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Control-lever Test inj. tubing : 9 681 230 706 position degrees: 42...50 Outside diameter x Wall thickness Testing: : 6,00x2,00x600 1st c-rod trav.mm: 11,35 x Length mm Speed 1/min: 1080...1100 2nd c-rod trav.mm: 4.0 Speed 1/min: 1160...1180 3rd c-rod trav.mm: 2.5 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Speed 1/min: 1200 4th speed 1/min: 1250 per values ____ START OF DELIVERY C-rod trav.mm : 0,3...1,7 Prestroke mm : 2,75...2,85 Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever position degrees: 20...28 Setting point w/out aux. spring 1/min : 375 Contr.-rod trav.mm: 4,9...5,1 SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) Testing:

E18

TORQUE CONTROL

Torque-control curve - 1st version 1st speed 1/min : 1050

C-rod trav.mm : 12,35 2nd speed 1/min : 800

C-rod trav.mm : 12,90...13,20 3rd speed 1/min : 600 C-rod trav.mm : 13,05...13,15

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del.quantity cm3/: 140,0...146,0 1000H.: (139,0...147,0)

SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : CAS 5,5 B : 7.86 BASIC SETTING Edition Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1100 Combination no. : 9 400 230 062 Contr.-rod trav.mm: 10,4 Del.quantity cm3/: 8,5...8,7 Injection pump Pump designation : PES4A95D320LS2612 cm3/:0.30Governor Dispersion Governor design. : RSV425...1100A0B2167 100H.: (0,60) 1/min: 425 Customer-spec. information 2nd speed Contri-rod trav. m: 7,0 Customer : CASE Del.quantity cm3/: 1.4...2.0 Dispersion cm3/: 0.30 100H.: (0.55) Engine : A 336 BD TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. ^DC Control-lever position : 38...42 Degree: LOSE 17min: 800 Speed Cont.-rod travelmm: 0,3...1,0 Overflow valve : 9 681 273 009 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Speed 1/min: 1100 Opening Del.quantity cm3/: 85.0...87.0 1000H.: (83.0...89.0) pressure, bar : 172...175 Test inj. tubing : 9 681 230 70: HIGHEST RATED SPEED 1st version Control-lever Outside diameter x Wall thickness position degrees: 36...44 : 6,00x2,00x600 x Length mm Testing: 1st c-rod trav.mm : 9,4 Speed 1/min : 1130...1150 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 2rd c-rod trav.mm : 4,0 Speed 1/min: 1225...1255 4th speed 1/min: 1350 per values ____ C-rod trav.mm : 0,3...1,7 START OF DELIVERY Prestroke mm : 2,2...2,3 : (2,15...2,35) Contr.-rod trav.mm: 10,5 Cam sequence : 1-3-4-2 LOWEST RATED SPEED I Control-lever position degrees: 21...29 Setting point w/out aux. spring 1/min : 425 Contr.-rod trav.mm: 6,4...6,6 Testing:

1/min : 100 Speed C-rod trav.mm min: 19.0 Speed 1/min: 425 mm : 6,9...7,1 mm : 2,0 1/min : 570...640 C-rod trav.mm C-rod trav.mm Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min: 1100 C-rod trav.mm: 10.4 2nd speed 1/min: 700 C-rod trav.mm : 11,25...11,55 3rd speed 1/min : 600 C-rod trav.mm : 11,55...11,65 FUEL-DELIVERY CHARACTERISTICS 1/min : 700 Speed Del.quantity cm3/: 93,5...99,5 1000H.: (92,5...101,5) Speed 1/min: 600 Del.quantity cm3/: 99,0...101,0 1000H.: (97,0...103,0)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : CAS 8,3 K1 Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1100 : 9 400 230 063 Combination no. Contr.-rod trav.mm: 10,65 Del.quantity cm3/ : 8,2...8,4 Injection pump Pump designation : PES6A95D420LS2551 Dispersion cm3/: 0.30Governor : RSV375...1100A0B2170 Governor design. -1R 100H.: (0,60) Customer-spec. information 1/min: 375 2nd speed Customer Contri-rod trav. m: 7,7 Del.quantity cm3/: 1,7...2,3 cm3/:0,30: A 504 BD Engine Dispersion 100H.: (0,55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: LOSE 17min: 800 Cont.-rod travelmm: 0,3...1.0 Overflow valve : 9 681 273 009 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -Calibrating nozzle-holder FULL-LOAD DELIV. AT FULL-LOAD STOP : 0 681 343 009 assembly 1st version Opening Speed 1/min: 1100 Del.quantity cm3/: 81,5...83,5 pressure, bar : 172...175 1000H.: (79,5...85,5) Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Control-lever Outside diameter x Wall thickness position degrees: 36...44 : 6,00x2,00x600 x Length mm Testing: (A) Injection pump setting values 1st c-rod trav.mm : 9,65 1/min : 1140...1150 Insp. values in parentheses Speed Set constant delivery quant. 2nd c-rod trav.mm : 4,0 1/min : 1250...1280 per values ____ Speed 4th speed 1/min : 1350 START OF DELIVERY C-rod trav.mm : 0,3...1,7 Prestroke mm : 2,2...2,3 : (2,15...2,35)
Contr.-rod trav.mm: 10,5
Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever position degrees: 19...27 Setting point w/out aux. spring 1/min : 375 Contr.-rod trav.mm: 7,1...7,3 Testing:

1/min : 100 Speed C-rod trav.mm min : 19.0 Speed 1/min : 375 C-rod trav.mm : 7.6...7,8 C-rod trav.mm : 2.0 mm : 2.0 1/min : 690...730 C-rod trav.mm Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100 C-rod trav.mm : 10,65 2nd speed 1/min: 800

C-rod trav.mm : 10,90...11,30

3rd speed 1/min: 600

C-rod trav.mm : 11,20...11,30

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 800
Del.quantity cm3/: 81,0...85,0
1000H.: (79,0...87,0)

Speed 1/min : 600

Del.quantity cm3/: 82,0...84,0 1000H:: (78,0...88,0)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 F2 Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1100 Combination no. : 9 400 230 065 Contr.-rod trav.mm: 10,3 Injection pump Del.quantity cm3/: 10,2...10,4 Pump designation : PES6A100D410RS3038-1 cm3/:0,30Governor Dispersion Governor design. : RSV450...1100A2B2106 -1L 1/min: 450 2nd speed Contr.-rod trav. m: 6.1
Del.quantity cm3/: 5.1...5,2
Dispersion cm3/: 0,20 Customer-spec. information Customer : JOHN DEERE Engine : 6466 AT 06 SLEEVE POSITION Control-lever position TEST BENCH REQUIREMENTS Degree: LOSE 17min: 800 Speed Calibrating-oil inlet temp. OC Cont.-rod travelmm: 0,3...1,0 : 38...42 Governor-spring reload Overflow valve Notch setting x : -: 1 417 413 000 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.5 1st version Calibrating nozzle-holder 1/min: 1100 Speed Del.quantity cm3/: 102.0...104.0 1000H.: (100.0...106.0) assembly : 0 681 343 009 Opening. pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Control-lever position degrees: 41...49 Test inj. tubing : 1 680 750 008 Testing: Outside diameter 1st c-rod trav.mm : 9,3 Speed 1/min : 1140...1150 x Wall thickness : 6,00x2,00x600 x Length mm 2nd c-rod trav.mm : 4.0 Speed 1/min : 1195...1225 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 1/min : 1300 4th speed C-rod trav.mm : 0.3...1.7 per values ____ LOWEST RATED SPEED I START OF DELIVERY Control-lever position degrees: 17...25 Setting point w/out aux. spring : 1,95...2,05 Prestroke mm : (1,90...2,10) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 Speed 1/min : 450 Contr.-rod trav.mm: 5,5...5,7 Testing: 1/min : 100 Speed C-rod trav.mm min: 19,0 1/min : 450 Speed

C-rod trav.mm : 6,0...6,2 C-rod trav.mm : 2,0 Speed 1/min : 510...570 Speed 1/min : 850 C-rod trav.mm max : 1,0

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1100
C-rod trav.mm: 10,30
2nd speed 1/min: 650
C-rod trav.mm: 11,30...11,60

FUEL-DELIVERY CHARACTERISTICS

1/min : 650 Speed

Del.quantity cm3/: 109.0...113.0 1000H.: (108.0...114.0)

BOSCH INJ. PUMP YEST SPECIFICATIONS Note inst. in remarks column Test sheet : DEE 7,6 H1 Edition : 7.86 Superceeded Calibrating oil : ISO-4113 Combination no. : 9 400 230 066 Injection pump Pump designation : PES6A100D410RS2676 Governor Governor design. : RSV425...1100A2B2161 Customer-spec. information : JOHN DEERE Customer Engine : 6466 T TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C : 38...42 Overflow valve : 1 457 413 010 Inlet press., bar : 1.5 Calibrating nozzle-holder : 0 681 343 009 assembly Opening pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 Outside diameter x Wall thickness : 6,00x2,00x600 x Length mm (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant.

per values ____ START OF DELIVERY Prestroke mm : 2,45...2,55 : (2,40...2,60) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75) SD mark cyl. no. : 1 BASIC SETTING 1st speed 1/mi: 1100 Contr.-rod trav.mm: 9,4 Del.guantity cm3/: 9,9...10,1 cm3/:0.35Dispersion 100H.: (0,60) 2nd speed 1/min: 425 Contr.-rod trav. m: 5,6 Del.quantity cm3/: 2,1...2,5 Dispersion cm3/: 0,35 100H.: (0,55) SLEEVE POSITION Control-lever position Degree: LOSE 17min: 800 Speed Cont.-rod travelmm: 0,3...1,0 Governor-spring reload Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version 1/min: 1100 Speed Charge press. hPa : 600 Del.quantity cm3/: 99.0...101.0 1000H.: (97.0...103.0) HIGHEST RATED SPEED 1st version Control-lever position degrees: 46...54 Testing: 1st c-rod trav.mm : 8,4 Speed 1/min : 1145...1155 2nd c-rod trav.mm: 4.0 Speed 1/min: 1195...1225 4th speed 1/min: 1300 C-rod trav.mm : 0,3...1.7 LOWEST RATED SPEED I Control-lever position degrees: 22...30 Setting point w/out aux. spring Speed 1/min : 425 Contr.-rod trav.mm: 5,5...5,7

Testing: 1/min : 100 Speed C-rod trav.mm min : 19.0 Speed 1/min : 425 C-rod trav.mm : 5,5...5,7 C-rod trav.mm : 2,0 Speed 1/min : 635...695 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 9,4 2nd speed 1/min : 750 C-rod trav.mm : 10,6...10,8 compensator (LDA, ADA, ALDA) 1st version Setting 1/min : 500 hPa : 170 Speed Pressure hPa Contr.-rod trav.mm: 10,25...10,35 Measurement 1/min : 500 Speed 1st pressure hPa : 80 C-rod trav.mm : 9,40...9,80 C-rod trav.mm : 9,20 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 600 1/min : 750 Speed Del.quantity cm3/: 116,0...119,0 1000H.: (113,5...121,5)
Speed 1/min: 500
Del.quantity cm3/: 86,5...89,5 1000H.: (84,0...92,0) Remarks:

SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 H2 Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1100 1st speed : 9 400 230 066 Combination no. Contr.-rod trav.mm: 9,4 Del.quantity cm3/: 9,9...10,1 Injection pump Pump designation : PES6A100D410RS2676 cm3/:0.35Dispersion Governor : RSV435...1100A2C2161 Governor design. 100H.: (0,60) Customer-spec. information 2nd speed 1/min: 425 Contr.-rod trav. m: 5,6
Del.quantity cm3/: 2,1...2,5
Dispersion cm3/: 0,35
100H.: (0,55) Customer : JOHN DEERE : 6466 T Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. OC Control-lever position : 38...42 Degree: LOSE Speed 17min: 800 Cont.-rod travelmm: 0,3...1,0 Overflow valve : 1 457 413 010 Governor-spring reload Inlet press., bar : 1.5 Notch setting x : -Calibrating nozzle-holder FULL-LOAD DELIV. AT FULL-LOAD STOP assembly : 0 681 343 009 1st version Speed Opening 1/min: 1100 pressure, bar : 172...175 Charge press. hPa : 600 Del.quantity cm3/: 99.0...101.0 1000H.: (97.0...103.0) Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Outside diameter Control-lever x Wall thickness position degrees: 46...54 : 6,00x2,00x600 x Length mm (A) Injection pump setting values Testing: Insp. values in parentheses Set constant delivery quant. per values ____ 1/min : 1300 START OF DELIVERY 4th speed Prestroke mm : 2,45...2,55 : (2,40...2,60)
Contr.-rod trav.mm: 10,5 LOWEST RATED SPEED I

1st c-rod trav.mm : 8,4 Speed 1/min : 1145...1155 2nd c-rod trav.mm : 4,0 Speed 1/min : 1195...1225 C-rod trav.mm : 0,3...1,7 Control-lever position degrees: 22...30 Setting point w/out aux. spring Speed 1/min : 425 Gentr.-rod trav.mm: 5,0...5,2

Cam sequence : 1-5-3-6-2-4

Testing: 1/min : 100 Speed C-rod trav.mm min: 19,0 1/min : 425 Speed mm : 5,5...5,7 mm : 2,0 1/min : 635...695 C-rod trav.mm C-rod trav.mm Speed TORQUE CONTROL Torque-control curve - 1st version 1/min : 1100 1st speed C-rod trav.mm : 9.4 2nd speed 1/min : 750 C-rod trav.mm : 10,6...10,8 compensator (LDA,ADA,ALDA) 1st version Setting Speed 1/min : 500 Pressure hPa : 170 Contr.-rod trav.mm: 10,25...10,35 Measurement 1/min : 500 Speed 1st pressure hPa : 80 C-rod trav.mm : 9,40...9,80 : 9,20 C-rod trav.mm FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa: 600 1/min : 750 Speed Del.quantity cm3/: 116,0...119,0 1000H.: (113,5...121,5) Speed 1/min: 500 Del.quantity cm3/: 86,5...89,5 1000H.: (84,0...92,0)

SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 H Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1100 1st speed Combination no. : 9 400 230 067 Contr.-rod trav.mm: 10,2...10,3 Del.quantity cm3/: 11,1...11,3 Injection pump Pump designation : PES6A100D410RS2676 Governor cm3/: 0.35Dispersion Governor design. : RSV425...1100A2C2161 100H.: (0,6) -21 2nd speed 1/min: 425 Contr.-rod trav. m: 5,8...6,0 Del.quantity cm3/: 2,4...2,8 Dispersion cm3/: 0,35 Customer-spec. information Customer : JOHN DEERE Engine : 6466 A 100H.: (0,55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. OC Control-lever position : 38...42 Degree: LOSE 17min: 800 Speed Overflow valve Cont.-rod travelmm: 0.3...1.0 : 1 457 413 010 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -Calibrating nozzle-holder FULL-LOAD DELIV. AT FULL-LOAD STOP : 0 681 343 009 assembly 1st version Speed 1/min: 1100 Charge press. hPa: 800 Del.quantity cm3/: 111.0...113.0 1000H.: (109.0...115.0) Dispersion cm3/: 3.5 Opening pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 1000H.: (6.0) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6,00X2,00X600 1st version x Length mm Control-lever (A) Injection pump setting values position degrees: 43...51 Insp. values in parentheses Set constant delivery quant. Testing: 1st c-rod trav.mm : 9,2 Speed 1/min : 1145...1155 per values ____ 2nd c-rod trav.mm : 4,0 START OF DELIVERY Speed 1/min: 1190...1220 4th speed 1/min: 1300 Prestroke mm : 2,45...2,55 : (2,40...2,60) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 C-rod trav.mm : 0,3...1,4 LOWEST RATED SPEED I Control-lever position degrees: 18...26 Setting point w/out aux. spring Speed 1/min : 425

```
Contr.-rod trav.mm: 5,3...5,5
Testing:
            1/min : 100
Speed
C-rod trav.mm min : 19,0
            1/min : 425
Speed
                 : 5,8...6,0
C-rod trav.mm
                   : 2,0
C-rod trav.mm
Speed
            1/min : 600...660
TORQUE CONTROL
Torque-control curve - 1st version
           1/min : 1100
1st speed
C-rod trav.mm : 10,2...10,3
2nd speed 1/min : 750
  C-rod trav.mm : 11,4...11,6
 compensator (LDA,ADA,ALDA)
1st version
Setting
            1/min : 500
Speed
            hPa : 230
Pressure
Contr.-rod trav.mm: 11,25...11,35
Measurement
            1/min : 500
Speed
1st pressure hPa : 100
  C-rod trav.mm : 9,80...10,20
  C-rod trav.mm
                  : 9,45
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa: 800
            1/min : 750
Speed
Del.quantity cm3/: 127,5...130,5
            1000H.: (125,0...133,0)
            1/min : 500
Speed
Del.quantity cm3/: 87.5...90.5
1000H.: (85.0...93.0)
Remarks:
```

SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 H3 Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1000 Combination no. : 9 400 230 068 Contr.-rod trav.mm: 9,9 Injection pump Del.quantity cm3/: 10,5...10,7 Pump designation : PES6A100D410RS2676-1 Governor Dispersion cm3/: 0.35Governor design. : RSV450...1000A1B2186 100H.: (0,60) Customer-spec. information 2nd speed 1/min: 450 Contr.-rod trav. m: 5,4
Del.quantity cm3/: 1,8...2,2
Dispersion cm3/: 0,35
100H.: (0,60) Customer : JOHN DEERE Engine : 6466 A TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. C Control-lever position : 38...42 Degree: LOSE 17min: 800 Speed Overflow valve Cont.-rod travelmm: 0.3...1.0 : 1 457 413 010 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version 1/min: 1000 Opening Speed Del.quantity cm3/: 105.0...107.0 1000H.: (103.0...109.0) pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Outside diameter Control-lever x Wall thickness position degrees: 48...56 : 6,00x2,00x600 x Length mm Testing: (A) Injection pump setting values 1st c-rod trav.mm : 8,9 Speed 1/min: 1045...1055 2nd c-rod trav.mm: 4,0 Insp. values in parenthoses Set constant delivery quant. per values 1/min : 1070...1100 4th speed 1/min: 1150 START OF DELIVERY C-rod trav.mm : 0,3...1,7 Prestroke mm : 2,45...2,55 : (2,4...2,6) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever position degrees: 22...30 Setting point w/out aux. spring 1/min : 450 Contr.-rod trav.mm: 4,8...5,0 Speed 1/min: 450 C-rod trav.mm : 5,3...5,5

C-rod trav.mm : 2.0 Speed 1/min : 560...620

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1000
C-rod trav.mm: 9,9
2nd speed 1/min: 700
C-rod trav.mm: 10,3...10,5

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 700
Del.quantity cm3/: 109.5...112.5
1000H.: (107,0...115,0)

SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : DEE 7,6 H4 Test sheet Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1000 Combination no. : 9 400 230 068 Contr.-rod trav.mm: 9,9 Injection pump Del.guantity cm3/: 10,5...10,7 Pump designation : PES6A100D410RS2676-1 cm3/:0,35Dispersion Governor : RSV450...1000A1C2186 Governor design. 100H.: (0,60) 1/min: 450 Customer-spec. information 2nd speed Contr.-rod trav. m: 5.4
Del.quantity cm3/: 1.8...2,2
Dispersion cm3/: 0.35 : JOHN DEERE Customer : 6466 A Engine 100H.: (0,60) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position Degree: LOSE : 38...42 17min: 800 Cont.-rod travelmm: 0.3...1.0 Overflow valve : 1 457 413 010 Governor-spring reload Notch setting x : -Inlet press., bar : 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version 1/min: 1000 Speed Opening Del.quantity cm3/: 105.0...107.0 1000H.: (103.0...109.0) pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Control-lever Outside diameter x Wall thickness position degrees: 48...56 : 6,00x2,00x600 x Length mm Testing: 1st c-rod trav.mm : 8,9 (A) Injection pump setting values Speed 1/min: 1045...1055 Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4,0 1/min : 1070...1100 per values ____ Speed 4th speed 1/min : 1150 C-rod trav.mm : 0.3...1.7 START OF DELIVERY LOWEST RATED SPEED I : 2,45...2,55 Prestroke mm : (2,40...2,60) Control-lever Contr.-rod trav.mm: 10,5 position degrees: 22...30 Cam sequence : 1-5-3-6-2-4 Setting point w/out aux. spring 1/min : 450 Contr.-rod trav.mm: 4,8...5,0 Speed 1/min: 450 Speed : 5,3...5,5 C-rod trav.mm

C-rod trav.mm : 2,0 Speed 1/min : 560...620

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1000
C-rod trav.mm: 9,9
2nd speed 1/min: 700
C-rod trav.mm: 10,3...10,5

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 700 Del.quantity cm3/: 109.5...112.5 1000H.: (107,0...115,0)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : DEE 7,6 H6 Test sheet : 7.86 Edition BASIC SETTING Superceeded Calibrating oil : OSO-4113 1st speed 1/mi: 950 Combination no. : 9 400 230 070 Contr.-rod trav.mm: 10,2 Del.quantity cm3/: 9,4...9,6 Injection pump Pump designation : PES6A100D410RS2676-1 Governor Dispersion cm3/: 0.35Governor design. : RSV4C3...950A1B2186. 100H.: (0,60) 2nd speed 1/min: 400 Contr.-rod trav. m: 6,5 Del.quantity cm3/: 1,8...2,2 Customer-spec. information Customer : JOHN DEERE : 6466-T cm3/:0.35Engine Dispersion 100H.: (0,55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. OC Control-lever position : 38...42 Degree: LOSE Speed 17min: 800 Cont.-rod travelmm: 0,3...1,0 Overflow valve : 1 457 413 010 Governor-spring reload Notch setting x : -Inlet press., bar: 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version 1/min: 950 Opening Speed Del, quantity cm3/: 94,0...96,0 1000H.: (92,0...98,0) pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Outside diameter Control-lever x Wall thickness position degrees: 47...55 : 6,00x2,00x600 x Length mm Testing: 1st c-rod trav.mm : 9,2 Speed 1/min : 995...1005 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4,0 Speed 1/min: 1050...1080 4th speed 1/min: 1150 per values ____ START OF DELIVERY C-rod trav.mm : 0,3...1,7 : 2,45...2,55 LOWEST RATED SPEED I Prestroke mm : (2,75...2,95)
Contr.-rod trav.nm: 10,5
Cam sequence Control-lever position degrees: 21...29 Cam sequence : 1-5-3-6-2-4 Setting point w/out aux. spring 1/min : 400 Contr.-rod trav.mm: 5,9...6,1 1/min : 400 Speed C-rod trav.mm : 6,4...6,6

F08

C-rod trav.mm : 2.0 Speed 1/min : 555...615

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 950
C-rod trav.mm: 10,2
2nd speed 1/min: 650
C-rod trav.mm: 11,4...11,6

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 650
Del.quantity cm3/: 112.0...115.0
1000H.: (109,5...117,5)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 H8 Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 890 : 9 400 230 071 Contr.-rod trav.mm: 12,0 Combination no. Injection pump Del.quantity cm3/: 13,7...13,9 Pump designation : PES6A100D410RS2676-1 cm3/:0.35Dispersion Governor Governor design. : RSV400...900A7B2088-100H.: (0,60) Customer-spec. information 1/min: 400 2nd speed Contr.-rod trav. m: 5.1
Del.quantity cm3/: 1,3...1,7
Dispersion cm3/: 0,35
100H.: (0,55) Customer : JOHN DEERE : 6466 T Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: LOSE Speed 17min: 800 Overflow valve Cont.-rod travelmm: 0,3...1,0 : 1 457 413 010 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -Calibrating nozzle-holder HIGHEST RATED SPEED : 0 681 343 009 1st version assembly Control-lever Opening position degrees: 49...57 pressure, bar : 172...175 Testing: 1st c-rod trav.mm : 11.0 Speed 1/min : 915...925 Test inj. tubing : 9 681 230 706 2nd c-rod trav.mm: 4.0 1/min: 945...975 Speed Outside diameter x Wall thickness 4th speed 1/min : 1050 C-rod trav.mm : 0,3...1,7 : 6,00x2,00x600 x Length mm (A) Injection pump setting values LOWEST RATED SPEED I Insp. values in parentheses Control-lever Set constant delivery quant. position degrees: 20...28 per values ____ Setting point w/out aux. spring 1/min : 400 START OF DELIVERY Contr.-rod trav.mm: 4,5...4,7 Speed 1/min: 400 C-rod trav.mm: 5,0...5,2 C-rod trav.mm: 2,0 Speed 1/min: 430...490 Prestroke mm : 2,45...2,55 : (2,4...2,6)
Contr.-rod trav.mm: 10,5
Cam sequence : 1-5-3-6-2-4 FUEL-DELIVERY CHARACTERISTICS 1/min : 890 Speed

Del.quantity cm3/: 137.0...139.0 1000H.: (135,0...141,0) Remarks: F11

SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0.5(0.75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 H7 Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1100 1st speed Combination no. : 9 400 230 072 Contr.-rod trav.mm: 10,35 Injection pump Del.quantity cm3/: 11,0...11,2 Pump designation : PES6A100D410RS2676 cm3/: 0.35Dispersion Governor Governor design. : RSV400...1100A2B2086 100H.: (0,60) 1/min: 400 Customer-spec. information 2nd speed Contr.-rod trav. m: 5.3
Del.quantity cm3/: 1.3...1.7
Dispersion cm3/: 0.35 : JOHN DEERE Customer Engine : 6466 A 100H.: (0,55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. OC Control-lever position : 38...42 Degree: LOSE 17min: 800 Overflow valve Cont.-rod travelmm: 0.3...1.0 : 1 457 413 010 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version 1/min: 1100 Speed Opening. Charge press. hPa: 600
Del.quantity cm3/: 110,0...112,0
1000H.: (108,0...114,0) pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED Outside diameter 1st version x Wall thickness Control-lever : 6,00x2,00x600 x Length mm position degrees: 48...56 (A) Injection pump setting values Testing: 1st c-rod trav.mm : 9,35 Speed 1/min : 1145...1155 Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4.0 Speed 1/min : 1195...1225 per values ____ 1/min : 1300 START OF DELIVERY 4th speed C-rod trav.mm : 0,3...1,7 Prestroke mm : 2,45...2,55 : (2,40...2,60) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever position degrees: 24...32 Setting point w/out aux. spring 1/min : 400 Contr.-rod trav.mm: 4,7...4,9

```
Testing:
              1/min : 100
Speed
C-rod trav.mm min: 19,0
              1/min : 40Ó
Speed
                 : 5,2...5,4
C-rod trav.mm
C-rod trav.mm
                    : 2,0
              1/min : 600...660
Speed
TORQUE CONTROL
Torque-control curve - 1st version
             1/min : 1100
1st speed
C-rod trav.mm : 10,35
2nd speed 1/min : 750
  C-rod trav.mm : 11,65...11,85
 compensator (LDA,ADA,ALDA)
1st version
Setting
              1/min : 500
Speed
              hPa : 210
Pressure
Contr.-rod trav.mm: 11,25...11,35
Measurement
              1/min : 500
Speed
1st pressure hPa : 70
  C-rod trav.mm : 9,90...10,30
C-rod trav.mm : 9,40
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa: 600
Speed
              1/min : 750
Del.quantity cm3/: 126,5...129,5
1000H.: (124,0...132,0)
Speed 1/min: 500
Del.quantity cm3/: 87,5...90,5
1000H.: (85,0...93,0)
Remarks:
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BOSCH INJ. PUMP TEST SPECIFICATIONS 270-315 Tolerance + - ° : 0,5(0,75) Note inst. in remarks column SD mark cyl. no. : 1 : IHC 9,0 E1 Test sheet Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1400 1st speed Combination no. : 9 400 230 074 Contr.-rod trav.mm: 11,3 Injection pump Del.quantity cm3/ : 7,0...7,2 Pump designation : PES8A95D32ORS2624 cm3/:0.35Governor Dispersion Governor design. : RQV325...1400AB1149-100H.: (0,60) 2nd speed 1/min: 325 Contr.-rod trav. m: 7,1 Del.quantity cm3/: 1,2...1,6 Dispersion cm3/: 0.35 Customer-spec. information Customer : IHC : D9L Engine 100H.: (0,60) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. OC Control-lever position : 38...42 Degree: MAX Cont.-rod travelmm: 15,2...17,8 Overflow valve : 1 417 413 019 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 2.8 1st version 1/min: 1400 Speed Del.quantity cm3/: 69.5...71.5 1000H.: (67,5...73,5) Calibrating nozzle-holder : 0 681 343 009 assembly HIGHEST RATED SPEED Opening. pressure, bar : 172...175 1st version Control-lever position degrees: 60..68 Test inj. tubing : 1 680 750 008 Testing: 1st c-rod trav.mm: 10,3 Outside diameter x Wall thickness Speed 1/min: 1440...1450 2nd c-rod trav.mm : 4.0 Speed 1/min : 1525...1555 : 6,00X2,00X600 x Length mm (A) Injection pump setting values Insp. values in parentheses LOWEST RATED SPEED I Set constant delivery quant. Control-lever per values ____ position degrees: 7...15 Setting point w/out aux. spring START OF DELIVERY 1/min : 325 Speed Contr.-rod trav.mm: 7,0...7,2 Prestroke mm : 2,55...2,65 : (2,50...2,70)
Contr.-rod trav.mm: 10,5 Testing: Speed 1/min : 100 Cam sequence : 1-8-7-3-6-5-4-2C-rod trav.mm min : 9,4 C-rod trav.mm : 2.0 Speed 1/min : 630...690 SD ang. spacing CS: 0-45-90-135-180-225-SWITCH-OVER POINT

F14

Speed 1/min : 180...250

FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 800
Del.quantity cm3/: 56,0...59,0
1000H.: (54,0...61,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS 270-315 Tolerance + - 0 : 0.5(0.75) Note inst. in remarks column SD mark cyl. no. : 1 : IHC 9,0 E Test sheet Edition BASIC SETTING : 7.86 Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1400 Combination no. : 9 400 230 075 Contr.-rod trav.mm: 12,2 Injection pump Del.quantity cm3/ : 7,8...8,0 Pump designation : PES8A95D32ORS2624 Governor Dispersion cm3/:0.60: RQV325...1400AB1149-Governor design. 1/min: 325 2nd speed Contr.-rod trav. m: 7,1 Del.quantity cm3/: 1,2...1,6 Dispersion cm3/: 0,55 Customer-spec. information Customer : IHC SLEEVE POSITION Engine : D9L Control-lever position TEST BENCH REQUIREMENTS Degree: MAX Cont.-rod travelmm: 15,2...17,8 Calibrating-oil inlet temp. OC : 38...42 FULL-LOAD DELIV. AT FULL-LOAD STOP Overflow valve 1st version : 1 417 413 019 1/min: 1400 Speed Del.quantity cm3/: 77.5...79.5 1000H.: (75.5...81.5) Inlet press., bar : 2.8 HIGHEST RATED SPEED Calibrating nozzle-holder assembly : 0 681 343 009 1st version Control-lever Opening position degrees: 62,0...70,0 pressure, bar : 172...175 Testing: 1st c-rod trav.mm : 11.2 Speed 1/min : 1440...1450 Test inj. tubing : 9 681 230 706 2nd c-rod trav.mm : 4,0 1/min : 1550...1580 Outside diameter 4th speed 1/min: 1630 x Wall thickness C-rod trav.mm : 0...1.0 : 6,00x2,00x600 x Length mm LOWEST RATED SPEED I (A) Injection pump setting values Control-lever Insp. values in parentheses Set constant delivery quant. position degrees: 7...15 per values ____ Setting point w/out aux. spring 1/min : 325 START OF DELIVERY Contr.-rod trav.mm: 7,0...7,2 : 2,55...2,65 : (2,75...2,95) : 1-8-7-3-6-5-4-2 Prestroke mm Testing: 1/min : 100 Speed C-rod trav.mm min : 9.1 C-rod trav.mm : 2.0 Cam sequence 1/min : 630...690 Speed SD ang. spacing CS: 0-45-90-135-180-225-FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 800

F16

Del.quantity Lm3/: 67.0...69.0 1000H:: (65.0...71.0) Remarks: F17

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BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                                           270-315
                                                     Tolerance + - 0
                                                                        : 0,5(0,75)
Note inst. in remarks column
                                                     SD mark cyl. no. : 1
Test sheet
                   : IHC 9,0 C1
Edition
                    : 7.86
                                                     BASIC SETTING
Superceeded
Calibrating oil : ISO-4113
                                                                    1/mi: 1400
                                                     1st speed
Combination no. : 9 400 230 077
                                                     Contr.-rod trav.mm: 11,40
                                                     Del.quantity cm3/ : 7,1...7,3
Injection pump
Pump designation : PES8A95D32ORS2620
                                                     Dispersion
                                                                   cm3/:0.35
Governor
Governor design. : RQV325...1400AB1207
                                                                   100H.: (0,60)
Customer-spec. information
                                                                   1/min: 325
Customer
                   : IHC
                                                     2nd speed
                                                     Contrigration cm3/: 0,9...1,3
Dispersion cm3/: 0,35
100H.: (0,60)
                   : D9L
Engine
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. OC
                                                     SLEEVE POSITION
                   : 38...42
                                                     Control-lever position
                                                                  Degree: MAX
Overflow valve
                                                                   17min: 1600
                                                     Speed
                    : 1 417 413 019
                                                     Cont.-rod travelmm: 8,0
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar : 2.5
Calibrating nozzle-holder
                                                     1st version
                  : 0 681 343 009
                                                                   1/min: 1400
 assembly
                                                     Speed
                                                     Del.quantity cm3/: 71,0...73,0
1000H.: (69,0...75,0)
Opening
 pressure, bar : 172...175
                                                     HIGHEST RATED SPEED
                                                     1st version
Test inj. tubing : 9 681 230 702
                                                     Control-lever
                                                      position degrees: 59...67
Outside diameter
x Wall thickness
                                                     Testing:
                                                     1st c-rod trav.mm : 10,4
                   : 6,00x2,00x600
x Length mm
                                                       Speed 1/min: 1445...1465
                                                     2nd c-rod trav.mm: 4.0
Speed 1/min: 1540...1580
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                                 1/min : 1650
                                                     4th speed
    per values ____
                                                       C-rod trav.mm : 0...1.4
START OF DELIVERY
                                                     LOWEST RATED SPEED I
                                                     Control-lever
Prestroke mm : 3,3...3,4 : (3,25...3,45)
Contr.-rod trav.mm: 10,5
                                                      position degrees: 6...14
                                                     Setting point w/out aux. spring
                                                                1/min : 325
                                                     Speed
Cam sequence : 1-8-7-3-6-5-4-2
                                                     Contr.-rod trav.mm: 6,9...7,1
                                                     Testing:
                                                                  1/min : 100
                                                     Speed
SD ang. spacing CS: 0-45-90-135-180-225-
                                                     C-rod trav.mm min: 8,0
                                                                 1/min : 225
                                                     Speed
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F18

C-rod trav.mm : 7,5...9,0 C-rod trav.mm : 2,0 Speed 1/min : 610...680

TORQUE CONTROL

Dimension a mm : 0,4

Torque-control curve - 1st version 1st speed 1/min : 1400

C-rod trav.mm : 1400 C-rod trav.mm : 11,4 2nd speed 1/min : 1200 C-rod trav.mm : 11,5...11,7 3rd speed 1/min : 840 C-rod trav.mm : 11,8...11,9

SWITCH-OVER POINT

1/min : 120...190 Speed

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 840
Del.quantity cm3/: 58,0...61,0
1000H: (55,5...63,5)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : DEE 7,6 H9 Test sheet BASIC SETTING Edition : 7.86 Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 900 : 9 400 230 078 Combination no. Contr.-rod trav.mm: 10,9 Injection pump Del.quantity cm3/: 11,8...12,0 Pump designation : PES6A100D410RS2676-1 cm3/:0.35Governor Dispersion Governor design.: RSV500...900A1B2186-100H.: (0,60) 2nd speed Customer-spec. information 1/min: 500 : JOHN DEERE Contr.-rod trav. m: 4,9 Customer Del.quantity cm3/: 1,2...1,6 Dispersion cm3/: 0,35 100H.: (0,55) : 6466 A Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: LOSE Speed 17min: 800 Overflow valve Cont.-rod travelmm: 0,3...1,0 : 1 457 413 010 Governor-spring reload Inlet press., bar : 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LUAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version 1/min: 900 Opening Speed Del.quantity cm3/: 118,0...120,0 1,000H.: (116,0...122,0) pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Outside diameter Control-lever position degrees: 42...50 x Wall thickness : 6,00x2,00x600 x Length mm Testing: 1st c-rod trav.mm : 9.9 Speed 1/min : 930...940 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 2nd c=red trav.mm : 4,0 per values ____ Speed 1/min: 965...995 4th speed 1/min: 1050 START OF DELIVERY C-rod trav.mm : 0.3...1.7 : 2,45...2,55 LOWEST RATED SPEED I Prestroke mm (2,4...2,6) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 Control-lever position degrees: 22...30 Setting point w/out aux. spring 1/min : 500 Contr.-rod trav.mm: 4,4...4,6 Testing:

Speed 1/min: 100
C-rod trav.mm min: 19,0
Speed 1/min: 500
C-rod trav.mm : 4,9...5,1
C-rod trav.mm : 2,0
Speed 1/min: 560...620

TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min: 900
C-rod trav.mm : 10,9
2nd speed 1/min: 650
C-rod trav.mm : 12,1...12,3

FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 650
Del.quantity cm3/: 132,5...135,5
1000H.: (130,0...138,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS 270-315 Tolerance + - 0 : 0,5(0,75) Note inst. in remarks column SD mark cyl. no. : 1 : IHC 9,0 C Test sheet : 7.86 Edition BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1400 1st speed : 9 400 230 079 Combination no. Contr.-rod trav.mm: 11,75 Injection pump Del.quantity cm3/: 7,5...7,7 : PES8A95D32ORS2620 Pump designation Governor Dispersion cm3/:0.35: RQV325...1400AB1207-Governor design. 100H.: (0,60) Customer-spec. information 2nd speed 1/min: 325 : IHC Contr.-rod trav. m: 7,2 Customer Del.quantity cm3/: 0,9...1,3 Dispersion cm3/: 0,35 100H.: (0,55) Engine : D9L TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: MAX Speed 17min: 1600 Cont.-rod travelmm: 8.0 Overflow valve : 1 417 413 019 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 2.5 1st version Speed 1/min: 1400 Calibrating nozzle-holder Del.quantity cm3/: 75,0...77,0 1000H.: (73,0...79,0) : 0 681 343 009 assembly Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Control-lever Test inj. tubing : 9 681 230 702 position degrees: 59...67 Outside diameter Testing: 1st c-rod trav.mm: 10,75 x Wall thickness 1/min : 1445...1465 : 6,00X2,00X600 x Length mm Speed 2nd c-rod trav.mm: 4.0 Speed 1/min: 1555...1595 Speed (A) Injection pump setting values 1/min : 1650 Insp. values in parentheses Set constant delivery quant. 4th speed C-rod trav.mm : 0...1,4 per values ____ LOWEST RATED SPEED I START OF DELIVERY Control-lever position degrees: 7...15 Prestroke mm : 3,3...3,4 : (3,25...3,45) Contr.-rod trav.mm: 10,5 Cam sequence : 1-8-7-3-6-5-4-2 Setting point w/out aux. spring 1/min : 325 Speed Contr.-rod trav.mm: 7,1...7,3 Testing: 1/min : 100 Speed C-rod tray.mm min: 8.0 SD ang. spacing CS: 0-45-90=135-180-225-1/min : 225 Speed

F22

C-rod trav.mm : 7,5...9,0 C-rod trav.mm : 2,0 Speed 1/min : 625...695

TORQUE CONTROL

Dimension a mm : 0,4
Torque-control curve - 1st version
1st speed 1/min : 1400
C-rod trav.mm : 11,75
2nd speed 1/min : 1200
C-rod trav.mm : 11,9...12,1
3rd speed 1/min : 845
C-rod trav.mm : 12,15,13

C-rod trav.mm : 12,15...12,35

SWITCH-OVER POINT

1/min : 120...190 Speed

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 845

Del.quantity cm3/: 63.5...66.5 1000H.: (61.0...69.0)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : CAS 8,3 D1 : 7.86 Test sheet Edition BASIC SETTING Superceeded : ISO-4113 Calibrating oil 1st speed 1/mi: 1100 Combination no. : 9 400 230 080 Contr.-rod trav.mm: 10,5 Injection pump Del.quantity cm3/ : 7,6...7,8 Pump designation : PES6A95D420LS2551 cm3/:0.35Governor Dispersion Governor design. : RSV375...1100A0B2166 100H.: (0,55) 2nd speed 1/min: 375 Contr.-rod trav. m: 7,8 Customer-spec. information Customer : CASE Del.quantity cm3/: 1,6...2,0 cm3/: 0.35: A 504 BD Engine Dispersion 100H.: (0,55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. ^DC Control-lever position : 38...42 Degree: LOSE 1/min: 800 Calibrating-oil return temp. °C Cont.-rod travelmm: 0,3...1,0 : 38...42 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -Calibrating nozzle-holder FULL-LOAD DELIV. AT FULL-LOAD STOP : 0 681 343 009 assembly 1st version Speed 1/min: 1100 Del.quantity cm3/: 76,0...78,0 Opening pressure, bar : 172...175 1000H.: (74.0...80.0) Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 1st version Control-lever Outside diameter x Wall thickness position degrees: 42...50 : 6,00x2,00x600 x Length mm Testing: (A) Injection pump setting values 1st c-rod trav.mm : 9,5 1/min : 1130...1150 Speed Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4,0 per values ____ 1/min : 1230...1250 Speed 3rd c-rod trav.mm: 2.0 Speed 1/min: 1275...1285 4th speed 1/min: 1350 START OF DELIVERY Prestroke mm : 2,2...2,3 : (2,15...2,35)
Contr.-rod trav.mm: 10,5 C-rod trav.mm : 0,3...1.7 LOWEST RATED SPEED I Cam sequence : 1-5-3-6-2-4 Control-lever position degrees: 36...44 Setting point w/out aux. spring Speed 1/min: 375 Contr.-rod trav.mm: 7,7...7,9

Testing: Speed 1/min : 100 C-rod trav.mm min : 19.0 C-rod trav.mm : 2.0 1/min : 670...730 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min: 1100 C-rod trav.mm: 10,50 2nd speed 1/min: 700 C-rod trav.mm : 11,80...12,00 3rd speed 1/min : 600 C-rod trav.mm : 12,15...12,25 FUEL-DELIVERY CHARACTERISTICS 1/min : 700 Speed Del.quantity cm3/: 86.5...89.5 1000H:: (84.0...92.0) Speed 1/min: 600 Del.quantity cm3/: 91.0...94.0 1000H:: (89.0...96.0)

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet : CAS 5,5 B1 Edition : 7.86 Superceeded Calibrating oil : ISO-4113 Combination no. : 9 400 230 081 Injection pump Pump designation : PES4A95D32OLS2612 Governor Governor design. : RSV375...1100A0B2167 Customer-spec. information Sustomer : CASE : A 336 BD Engine TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC : 38...42 Overflow valve : 9 681 273 009 Inlet press., bar : 1.5 Calibrating nozzle-holder assembly : 0 681 343 009 Opening pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 Outside diameter x Wall thickness : 6,00x2,00x600 x Length mm (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____ START OF DELIVERY

> : 2,15...2,25 : (2,1...2,2)

SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75) SD mark cyl. no. : 1 BASIC SETTING 1/mi: 1100 1st speed Contr.-rod trav.mm: 10,4 Del.quantity cm3/ : 8,8...9,0 Dispersion cm3/: 0.35100H.: (0,60) 1/min: 375 2nd speed Contri-rod trav. m: 7,1 Del.quantity cm3/: 1.6...2.0 Dispersion cm3/: 0.35 100H.: (0.55) SLEEVE POSITION Control-lever position Degree: LOSE 17min: 800 Cont.-rod travelmm: 0,3...1,0 Governor-spring reload Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Speed 1/min: 1100 Del.quantity cm3/: 88,0...90,0 1000H.: (86,0...90,0) HIGHEST RATED SPEED 1st version Control-lever position degrees: 39...47 Testing: 1st c-rod trav.mm : 9,4 Speed 1/min : 1130...1150 2nd c-rod trav.mm : 4,0 Speed 1/min : 1210...1230 3rd c-rod trav.mm : 2.5 Speed 1/min : 1240...1250 4th speed 1/min: 1350 C~rod trav.mm : 0,3...1,7 LOWEST RATED SPEED I Control-lever position degrees: 22...30 Setting point w/out aux. spring 1/min : 375

Contr.-rod trav.mm: 7,0...7,2

Prestroke mm

Contr.-rod trav.mm: 10,5

Cam sequence : 1-3-4-2

Testing:

1/min : 100 Speed C-rod trav.mm min : 19,0 C-rod trav.mm : 2,0 Speed 1/min : 570...640

TORQUE CONTROL

Torque-control curve - 1st version

1/min : 1100 1st speed C-rod trav.mm : 10,40 2nd speed 1/min : 700_

C-rod trav.mm : 11,35...11,55

3rd speed 1/min : 600

C-rod trav.mm : 11,60...11,70

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 700
Del.quantity cm3/: 96,5...99,5
1000H.: (94,0...102,0)
Speed 1/min: 600

Del.quantity cm3/: 100,0...103,0 1000H:: (98,0...105,0)

SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : CAS 8,3 K2 : 7.86 BASIC SETTING Edition Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1100 Combination no. : 9 400 230 082 Contr.-rod trav.mm: 10,65 Del.quantity cm3/: 8,2...8,4 Injection pump Pump designation : PES6A95D#20LS2551 cm3/:0,35Governor Dispersion Governor design. : RSV375...1100A0B2170 100H.: (0,60) 2nd speed 1/min: 375 Contr.-rod trav. m: 7,7 Del.quantity cm3/: 1,8...2,2 Dispersion cm3/: 0,35 Customer-spec. information Customer : CASE : A 504 BD Engine 100H.: (0,55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. OC Control-lever position : 38...42 Degree: LOSE Speed 17min: 800 Cont.-rod travelmm: 0,3...1,0 Overflow valve : 9 681 273 009 Governor-spring reload Notch setting x : -Inlet press., bar : 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Speed 1/min: 1100 Del.quantity cm3/: 81,5...83,5 1000H.: (79,5...85,5) Opening pressure, bar : 172...175 Test inj. tubing : 9 681 230 706 HIGHEST RATED SPEED 15t version Control-lever Outside diameter x Wall thickness position degrees: 36...44 : 6,00x2,00x600 x Length mm Testing: (A) Injection pump setting values 1st c-rod trav.mm: 9,65 Speed 1/min: 1140...1105 Insp. values in parentheses 2nd c-rod trav.mm: 4,0 Set constant delivery quant. per values ____ 1/min : 1250...1280 Speed START OF DELIVERY LOWEST RATED SPEED I Control-lever Prestroke mm : 2,2...2,3 position degrees: 19...27 : (2,15...2,35) Contr.-rod trav.mm: 10,5 Setting point w/out aux. spring 1/min : 375 Cam sequence : 1-5-3-6-2-4 Contr.-rod trav.mm: 7,1...7,3 Testing: 1/min : 100 Speed C-rod trav.mm min: 19,0

Speed 1/min : 375
C-rod trav.mm : 7,6...7,8
C-rod trav.mm : 2,0
Speed 1/min : 670...730

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1100 C-rod trav.mm: 10,65 2nd speed 1/min: 800 C-rod trav.mm: 10,95...11,15 3rd speed 1/min: 600

C-rod trav.mm : 11,20...11,30

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 700

Del.quantity cm3/: 81,5...84,5 1000H.: (79,0...87,0) Speed 1/min: 600 Del.quantity cm3/: 81,0...84,0 1000H.: (79,0...86,0)

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SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : CAS 8,3 A2 : 7.86 Edition BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1100 Combination no. : 9 400 230 083 Contr.-rod trav.mm: 10,9 Injection pump Del.quantity cm3/: 12,5...12,7 Pump designation : PES6A100D420LS3024 Governor Dispersion cm3/: 0.35Governor design. : RSV375...1100A2B798-100H.: (0,60) Customer-spec. information 1/min: 375 2nd speed Customer Contr.-rod trav. m: 6,0 Del.quantity cm3/: 1.8...2,2 Dispersion cm3/: 0.35 100H.: (0,55) Engine : A-504 BDT TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: LOSE 17min: 800 Overflow valve Cont.-rod travelmm: 0,3...1,0 : 9 681 273 009 Governor-spring reload Inlet press., bar : 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Opening Speed 1/min: 1100 pressure, bar : 172...175 Del.quantity cm3/: 125,0...127,0 1000H.: (123,0...129,0) HIGHEST RATED SPEED Test inj. tubing : 9 681 230 706 1st version Control-lever Outside diameter x Wall thickness position degrees: 46...54 : 6,00x2,00x600 x Length mm Testing: 1st c-rod trav.mm : 9,9 Speed 1/min : 1140...1150 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4.0 Speed 1/min : 1200...1230 4th speed 1/min : 1300 per values C-rod trav.mm : 0,3...1,7 START OF DELIVERY : 2,00...2,10 LOWEST RATED SPEED I Prestroke mm : (1.95...2,15) Contr.-rod trav.mm: 10.5 Cam sequence : 1-5-3-6-2-4 Control-lever position degrees: 22...30 Setting point w/out aux. spring Speed 1/min: 375 Contr.-rod trav.mm: 5,4...5,6 Testing:

G02

Speed 1/min: 100 C-rod trav.mm min: 19,0 Speed 1/min: 375 C-rod trav.mm: : 5,9...6,1 C-rod trav.mm: : 2,0 Speed 1/min: 490...550

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1100
C-rod trav.mm: 10,90
2nd speed 1/min: 750
C-rod trav.mm: 11,70...11,90

FUEL-DELIVERY CHARACTERISTICS

1/min : 750 Del.quantity cm3/: 133.0...136.0 1000H.: (130,0...138,0)

SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0.5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : DEE 7,6 H5 Test sheet Edition : 7.86 BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1100 1st speed Combination no. : 9 400 230 085 Contr.-rod trav.mm: 9,8 Del.quantity cm3/: 10,3...10,5 Injection pump Pump designation : PES6A100D410RS2676-1 Governor Dispersion cm3/: 0.35: RSV450...1100A2C2204 Governor design. 100H.: (0,60) Customer-spec. information 2nd speed 1/min: 450 Contr.-rod trav. m: 5.1
Del.quantity cm3/: 1.3...1,7
Dispersion cm3/: 0.35 Customer : JOHN DEERE Engine : 6466T 100H.: (0,55) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: LOSE 17min: 800 Speed Overflow valve Cont.-rod travelmm: 0,3...1,0 : 1 457 413 010 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -Calibrating nozzle-holder FULL-LOAD DELIV. AT FULL-LOAD STOP : 0 681 343 009 assembly 1st version 1/min: 1100 Opening Speed Del.quantity cm3/: 103,0...105,0 1000H.: (101,0...107,0) pressure, bar : 172...175 Test inj. tubing : 1 680 750 008 HIGHEST RATED SPEED 1st version Control-lever Outside diameter x Wall thickness position degrees: 45...53 : 6,00x2,00x600 x Length mm Testing: 1st c-rod trav.mm : 8.8 Speed 1/min : 1145...1155 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4,0 per values ____ 1/min : 1210...1240 4th speed 1/min: 1300 C-rod trav.mm : 0,3...1,7 START OF DELIVERY Prestroke mm : 2,45...2,55 : (2,40...2,60) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever position degrees: 22...30 Setting point w/out aux. spring 1/min : 450 Contr.-rod trav.mm: 4,5...4,7

Testing:

Speed 1/min : 100 C-rod trav.mm min: 19,0
Speed 1/min: 450
C-rod trav.mm : 5,0...5,2
C-rod trav.mm : 2,0 Speed 1/min: 600...660

TORQUE CONTROL

Torque-control curve - 1st version 1st speed 1/min: 1100

C-rod trav.mm : 9,8
2nd speed 1/min : 650
C-rod trav.mm : 10,4...10,6

FUEL-DELIVERY CHARACTERISTICS

1/min : 650 Speed Del.quantity cm3/: 108.0...111.0 1000H:: (105,5...113,5)

BOSCH INJ. PUMP TEST SPECIFICATIONS 270-315 Tolerance + - 0 : 0,5(0,75) Note inst. in 1 marks column SD mark cyl. no. : 1 Test sheet : 186 9,0 M Edition . 7.86 BASIC SETTING Superceeded : ISO-4113 Calibrating oil 1st speed 1/mi: 1400 : 9 400 230 086 Combination no. Contr.-rod trav.mm: 11,0...11 Del.guantity cm3/: 6.4...6.6 Injection pump Pump designation : PES8A95D32ORS2708 Dispersion cm3/: 0.35Governor Governor design. : RQV325...1400AB1213R 100H.: (0,60) Customer-spec. information 2nd speed 1/min: 350 Contr.-rod trav. m: 6,7...6,9 Del.quantity cm3/: 0,9...1,3 Dispersion cm3/: 0,35 100H.: (0,55) Customer : IHC Engine : D9L TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: MAX. 17min: 1450 Overflow valve Speed : 1 417 413 019 Cont.-rod travelmm: 15,2...17,8 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.5 Calibrating nozzle-holder 1st version : 0 681 343 009 1/min: 1400 assembly Speed Del.quantity cm3/: 64,0...66,0 1000H.: (62,0...68,0) Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 9 681 230 702 Control-lever position degrees: 63,5...68,2 Outside diameter x Wall thickness Testing: : 6,00X2,00X600 x Length mm 1st c-rod trav.mm : 10,0 Speed 1/min: 1450...1460 2nd c-rod trav.mm : 4.0 Speed 1/min : 1550...1580 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Speed 1/min : 1650 4th speed per values ____ C-rod trav.mm : 0...1.0 START OF DELIVERY LOWEST RATED SPEED I Control-lever : 3,3,..3,4 : (3,25,..3,45) position degrees: 7...15 Prestroke mm Setting point w/out aux. spring Contr.-rod trav.mm: 10,5 Speed 1/min : 350 Cam sequence : 1-8-7-3-6-5-4-2 Contr.-rod trav.mm: 6,7...6,9 Testing: 1/min : 100 Speed SD ang. spacing CS: 0-45-90-135-180-225-C-rod trav.mm min : 19,0 C-rod trav.mm : 2,0

G06

1/min : 630...690 Speed

TORQUE CONTROL

Dimension a mm : 0,40

Torque-control curve - 1st version
1st speed 1/min: 1400
C-rod trav.mm: 11,4
2nd speed 1/min: 1200
C-rod trav.mm: 11,5...11,7
3rd speed 1/min: 840

C-rod trav.mm : 11,8...11,9

SWITCH-OVER POINT

1/min : 180...250 Speed

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 840
Del.quantity cm3/: 55.0...58.0
1000H.: (52,5...60,5)

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BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                                            270-315
                                                      Tolerance + - 0
                                                                         : 0,5(0,75)
Note inst. in remarks column
                                                      SD mark cyl. no. : 1
Test sheet
                   : IHC 9,0 D
                                                     BASIC SETTING
Edition
                    : 7.86
Superceeded
Calibrating oil : ISO-4113
                                                                   1/mi: 1400
                                                      1st speed
Combination no.
                    : 9 400 230 087
                                                      Contr.-rod trav.mm: 11,4...11,5
                                                     Del.quantity cm3/ : 7,3...7,5
Injection pump
Pump designation : PES8A95D32ORS2708
Governor
                                                                    cm3/:0,35
                                                     Dispersion
Governor design.
                    : RQV325...1400AB1213-
                                                                    100H.: (0,60)
Customer-spec. information
                                                      2nd speed
                                                                    1/min: 350
                                                     Contr.-rod trav. m: 6.7...6.9
Del.quantity cm3/: 0.9...1.3
Dispersion cm3/: 0.35
Customer
                    : IHC
                    : D9L
Engine
                                                                    100H.: (0,55)
TEST BENCH REQUIREMENTS
                                                      SLEEVE POSITION
Calibrating-oil inlet temp. °C
                                                     Control-lever position
                    : 38...42
                                                                  Degree: MAX
                                                     Cont.-rod travelmm: 15,2...17,8
Overflow valve
                    : 1 417 413 019
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Inlet press., bar : 2.8
                                                     1st version
                                                                    1/min: 1400
                                                     Speed
                                                     Del.quantity cm3/: 73,0...75,0
Calibrating nozzle-holder
                  : 0 681 343 009
                                                                   1000H.: (71,0...77,0)
 assembly
                                                     HIGHEST RATED SPEED
Opening.
pressure, bar : 172...175
                                                     1st version
                                                     Control-lever
                                                      position degrees: 61,5...66,5
Test inj. tubing : 9 681 230 702
                                                     Testing:
                                                     1st c-rod trav.mm : 10.4
Speed 1/min : 1450...1460
Outside diameter
x Wall thickness
                                                     2nd c-rod trav.mm : 4.0
Speed 1/min : 1555...1585
4th speed 1/min : 1650
                   : 6,00x2,00x600
x Length mm
(A) Injection pump setting values
    Insp. values in parentheses
                                                        C-rod trav.mm : 0,0...1,0
    Set constant delivery quant.
    per values ____
                                                     LOWEST RATED SPEED I
                                                     Control-lever
START OF DELIVERY
                                                      position degrees: 8...16
                                                     Setting point w/out aux. spring
Prestroke mm : 3,30...3,40 : (3,25...3,45)
Contr.-rod trav.mm: 10,5
                                                                 1/min : 350
                                                     Contr.-rod trav.mn: 6,7...6,9
Cam sequence : 1-8-7-3-6-5-4-2
                                                     Testing:
                                                                  1/min : 100
                                                     Speed
                                                     C-rod trav.mm min : 8,0
                                                     C-rod trav.mm : 2,0
                                                                 1/min : 630...690
SD ang. spacing CS: 0-45-90-135-180-225-
                                                     Speed
G08
```

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1400 C-rod trav.mm: 11.75 2nd speed 1/min: 1200

C-rod trav.mm : 11,90...12,10 3rd speed 1/min : 845

C-rod trav.mm : 12,15...12,35

SWITCH-OVER POINT

Speed 1/min : 150...190

FUEL-DELIVERY CHARACTERISTICS

1/min : 840 Speed

Del.quantity cm3/: 62.5...65.5 1000H.: (60.0...68.0)

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BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                                             : 2,80...2,90
: (2,75...2,95)
                                                        Prestroke mm
Note inst. in remarks column
                                                        Contr.-rod trav.mm: 9,0...12,0
                     : CUM 8,3 B
                                                                            : 1-5-3-6-2-4
Test sheet
                                                        Cam sequence
Edition
                     : 9.86
Superceeded
                     : ISO-4113
Calibrating oil
                                                        SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0,5(0,75)
Combination no.
                     : 9 400 230 103
Injection pump
                                                        SD mark cyl. no. : 1
Pump designation : PES6A100D320/3RS2691
                                                        BASIC SETTING
                     : 9 410 230 028
EP type number
                                                                        1/mi: 1100
Governor
                                                        1st speed
Governor design. : RQV350...1100AB1227R
Governer no. : 9 420 231 015
                                                        Contr.-rod trav.mm: 12,8...12,9
Customer-spec. information
                                                        Del.quantity cm3/ : 13,1...13,2
Customer
                     : CUMMINS
                                                                       100H.: (12,9...13,5)
Engine
                     : 6 CT 8,3
                                                        Dispersion
                                                                       cm3/: 0.35
1st version kW : 156.6
Speed
               1/min: 2200
                                                                       100H.: (0,60)
                                                        2nd speed 1/min: 350
Contr.-rod trav. m: 5,6,..5,8
Del.quantity cm3/: 1,8...2,2
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. OC
                                                                       100H.: (1,6...2,5)
                     : 38...42
                                                                       cm3/: 0.35
                                                        Dispersion
                                                                       100H.: (0,55)
Overflow valve
                     : 1 417 413 047
                                                        (B) Setting of injection pump with
Inlet press., bar: 1.4
                                                             externally-mounted governor
Calibrating nozzle-holder
                                                        SLEEVE TRAVELS
 assembly
           : 1 688 901 017
                                                        1st speed 1/min: 350
                                                          Sleeve travel mm: 1,5...1,9
                                                                    1/min: 500
Opening
                                                        2nd speed
                                                          Sleeve travel mm: 3,3...3,6
                     : 207...210
 pressure, bar
                                                                      1/min: 800
                                                        3rd speed
                                                        Sleeve travel mm: 5,0...5,3
4th speed 1/min: 1160
Sleeve travel mm: 8,1...8,2
Perforated-plate
 diameter mm
                     : 0,6
                   : 1 680 750 014
                                                        FULL-LOAD DELIV. AT FULL-LOAD STOP
Test inj. tubing
Outside diameter
                                                        1st version
                                                                       1/min: 1100
x Wall thickness
                                                        Speed
                                                        Charge press. hPa : 670
Del.quantity cm3/ : 130,5...132,5
                   : 6,00x2,00x600
x Length mm
                                                                      1000H.: (128,5...134,5)
cm3/: 3,5
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                        Dispersion
                                                                      1000H.: (6,0)
    per values ____
                                                        HIGHEST RATED SPEED
START OF DELIVERY
                                                        1st version
Test pressure, bar: 25...27
G10
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Control-lever
 position degrees: 58,5...63,5
Testing:
1st c-rod trav.mm: 11,8
           1/min : 1150...1160
  Speed
2nd c-rod trav.mm : 4,0
             1/min : 1275...1305
1/min : 1350
  Speed
4th speed
  C-rod trav.mm : 0...1.0
LOWEST RATED SPEED I
Control-lever
 position degrees: 9...17
Speed
             17min : 350
                   : 5,6...5,8
: 2,0
C-rod trav.mm
C-rod trav.mm
             1/min : 485...545
Speed
 compensator (LDA, ADA, ALDA)
1st version
Setting
             1/min : 500
Speed
             hPa : 670
Pressure
Contr.-rod trav.mm: 12,8...12,9
Measurement
Speed
             1/\min : 500
  C-rod trav.mm : 10,15...10,35
2nd pressure hPa : 535
C-rod trav.mm : 12,1...12,2
3rd pressure hPa : 387
  C-rod trav.mm
                   : 10,65...11,05
SWITCH-OVER POINT
Speed
             1/min : 230...290
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 670
             1/min : 750
Speed
Del.quantity cm3/: 128,5...132,5
1000H:: (126,0...134,0)
              cm3/: -
Dispersion
             1000H.: -
Speed 1/min: 500
Del.quantity cm3/: 79,0...83,0
             1000H.: (77,0...85,0)
             cm3/:-
Dispersion
             1000H.: -
```

BOSCH INJ. PUMP TEST SPECIFICATIONS 1st speed 1/mi: 1050 Note inst. in remarks column Contr.-rod trav.mm: 10,9 Test sheet : DEE 7,6 A4 Edition : 7.86 Del.quantity cm3/: 13,7...13,9 Superceeded Calibrating oil : ISO-4113 cm3/:0.40Dispersion Combination no. : 9 400 231 042 100H.: (0,70) Injection pump 1/min: 450 2nd speed Contri-rod trav. m: 5,5 Pump designation : PES6P110A720RS361 11 Del.quantity cm3/: 0,9...1,5 Governor cm3/: 0.60Governor design. : RSV450...1100P2/467 Dispersion SLEEVE POSITION Customer-spec. information : JOHN DEERE Customer Control-lever position Degree: LOSE 1/min: 800 : 6466 AT Engine Speed Cont.-rod travelmm: 0,3...1,0 TEST BENCH REQUIREMENTS Governor-spring reload Calibrating-oil inlet temp. °C Notch setting x : -: 38...42 FULL-LOAD DELIV. AT FULL-LOAD STOP Overflow valve : 1 417 413 010 ist version 1/min: 1050 Speed Charge press. hPa : 670 Inlet press., bar : 1.5 Del.quantity cm3/: 137,0...139,0 1000H.: (134,0...142,0) Calibrating nozzle-holder : 0 681 343 009 assembly HIGHEST RATED SPEED 1st version Opening Control-lever pressure, bar : 175 position degrees: 42...50 Test inj. tubing : 1 680 750 015 Testing: 1st c-rod trav.mm : 9,9 Speed 1/min: 1095...1105 Outside diameter 2nd c-rod trav.mm : 4,0 x Wall thickness Speed 1/min: 1200...1230 4th speed 1/min: 1300 C-rod trav.mm: 0,3...1,7 : 6,00x1,50x600 x Length mm (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. LOWEST RATED SPEED I per values ____ Control-lever position degrees: 18...26 Setting point w/out aux. spring START OF DELIVERY Cam sequence : 1-5-3-6-2-4 Speed 1/min : 450 Contr.-rod trav.mm: 5.0 Testing: SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0,5(0,75) 1/min : 100 Speed C-rod trav.mm min : 19,0 1/min : 450 C-rod trav.mm : 5.5 C-rod trav.mm : 2.0 SD mark cyl. no. : 1 BASIC SETTING Speed 1/min: 635...695

G12

Speed 1/min : 850 C-rod trav.mm max: 1.0 TORQUE CONTROL Torque-control curve - 1st version 1/min : 1050 1st speed C-rod trav.mm : 10,85...10,95 2nd speed 1/min : 900 C-rod trav.mm : 11,10...11,20 3rd speed 1/min : 850 C-rod trav.mm : 10,85...11,15 4th speed 1/min : 650 C-rod trav.mm : 11,55...11,65 5th speed 1/min : 550 C-rod trav.mm : 8,85...8,95 compensator (LDA,ADA,ALDA) 1st version Setting 1/min : 500 Speed Pressure hPa : 410 Contr.-rod trav.mm: 10,85...10,95 Measurement Speed 1/min : 500 1st pressure hPa : 180 C-rod trav.mm : 9,40...9,80 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 670 Speed 1/min: 650
Del.quantity cm3/: 150.0...153.0
1000H.: (147.0...157.0)
Speed 1/min: 550 Del.quantity cm3/: 86,0...94,0 10008.: (85,0...95,0) Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : DEE 7,6 G2 Edition : 7.86 1/mi: 1100 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 12,0 Combination no. : 9 400 231 084 Del.quantity cm3/: 37,8...40,0 Injection pump Dispersion cm3/: 0,40 Pump designation : PES6P110A720RS3083-1 Governor 2nd speed 1/min: 425 Contri-rod trav. m: 6,5 Governor design. : RSV425...1100P2/489 Del.quantity cm3/: 1.1...1.6 Dispersion cm3/: 0.45 Customer-spec. information Customer : JOHN DEERE SLEEVE POSITION Control-lever position Engine : 6466 A Degree: LOSE TEST BENCH REQUIREMENTS 17min: 800 Speed Cont.-rod travelmm: 0,3...1,0 Calibrating-oil inlet temp. °C : 38...42 Governor-spring reload Notch setting x : -Overflow valve : 1 456 413 010 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Inlet press., bar : 1.5 1/min: 1100 Speed Charge press. hPa : 1200 Calibrating nozzle-holder Del.quantity cm3/: 137,5...139,5 1000H.: (134,5...142,5) : 0 681 343 009 assembly Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Control-lever Test inj. tubing : 9 681 271 022 position degrees: 46...54 Outside diameter Testing: 1st c-rod trav.mm : 11.0 Speed 1/min : 1155...1165 2nd c-rod trav.mm : 4.0 x Wall thickness : 6,00x1,50x600 x Length mm Speed 1/min: 1230...1260 4th speed 1/min: 1300 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. C-rod trav.mm : 0,3...1,4 per values ____ LOWEST RATED SPEED I START OF DELIVERY Control-lever position degrees: 21...29 : 3,45...3,55 : (3,40...3,60) Prestroke mm Setting point w/out aux. spring 1/min : 425 Contr.-rod trav.mm: 10.5 Cam sequence : 1-5-3-6-2-4 Contr.-rod trav.mm: 5,9...6,1 Testing: 1/min : 100 Speed C-rod trav.mm min: 19.0 SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75) 1/min : 425 Speed C-rod trav.mm : 6,4...6,6 G14

S-rod trav.mm : 2,0 Speed 1/min : 655...715 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 12.0 2nd speed 1/min : 700 C-rod trav.mm : 13,10...13,30 compensator (LDA, ADA, ALDA) 1st version Setting 1/min : 500 hPa : 370 Speed Pressure Contr.-rod trav.mm: 11,25...11,35 Measurement 1/min : 500 Speed 1st pressure hPa : 200 C-rod trav.mm : 10,10...10,50 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 1200 1/min : 700 Speed Del.quantity cm3/: 155,5...159,5 1000H.: (152,5...162,5)

1/min : 500 Speed

Del.quantity cm3/: 105.0...109.0 1000H.: (102.0...112.0)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : DEE 7,6 G3 Edition : 7.86 1/mi: 1100 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 12,0 Combination no. : 9 400 231 084 Del.quantity cm3/: 13,8...14,0 Dispersion cm3/: 0.40Injection pump Pump designation : PES6P110A72ORS3083-1 Governor 2nd speed 1/min: 425 Governor design. : RSV425...1100P2A489 Contr.-rod trav. m: 6,5 Del.quantity cm3/: 1.1...1.6 Dispersion cm3/: 0.45 Customer-spec. information : JOHN DEERE Customer SLEEVE POSITION Engine : 6466 A Control-lever position Degree: LOSE 17min: 800 TEST BENCH REQUIREMENTS Speed Cont.-rod travelmm: 0.3...1.0 Calibrating-oil inlet temp. OC : 38...42 Governor-spring reload Notch setting x : -Overflow valve : 1 456 413 010 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Inlet press., bar : 1.5 1/min: 1100 Speed Del.quantity cm3/: 137,5...139,5 Calibrating nozzle-holder : 0 681 343 009 1000H.: (134,5...142,5) assembly Opening HIGHEST RATED SPEED pressure, bar : 172...175 1st version Control-lever position degrees: 46...54 Test inj. tubing : 9 681 271 022 Testing: 1st c-rod trav.mm : 11.0 Speed 1/min : 1155...1165 Outside diameter x Wall thickness 2nd c-rod trav.mm: 4,0 : 6,00x2,00x600 x Length mm 1/min : 1230...1260 Speed 4th speed 1/min: 1350 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. C-rod trav.mm : 0,3...1,4 per values ____ LOWEST RATED SPEED I Control-lever START OF DELIVERY position degrees: 21...29 Setting point w/out aux. spring Prestroke mm : 3,45...3,55 : (3,40...3,60) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 Speed 1/min : 425 1, Contr.-rod trav.mm: 5,9...6 Testing: Speed 1/min: 100 C-rod trav.mm min: 19.0 Speed 1/min: 425 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) C-rod trav.mm : 6,4...6,6 C-rod trav.mm : 2,0

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1/min : 655...715 Speed TORQUE CONTROL Torque-control curve - 1st version 1/min : 1100 1st speed C-rod trav.mm : 12,0...12,1 2nd speed 1/min : 700 C-rod trav.mm : 13,10...13,30 compensator (LDA,ADA,ALDA) 1st version Setting 1/min : 500 hPa : 370 Speed Pressure Contr.-rod trav.ma: 12,45...12,55 Measurement 1/min : 500 Speed 1st pressure hPa : 200 C-rod trav.mm : 11,4...11,8 C-rod trav.mm : 10,9...11,1 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 1200 Speed 1/min : 700 Del.quantity cm3/: 155.5...159.5 1000H:: (152.5...162.5) 1/min : 500 Del.quantity cm3/: 105.0...109.0 1000H.: (102.0...112.0)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING Test sheet : DEE 10,1 B1 : 7.86 Edition 1/mi: 1050 1st speed Superceeded : ISO-4113 Calibrating oil Contr.-rod trav.mm: 13,9 Del.quantity cm3/: 21,3...21,5 Combination no. : 9 400 231 098 Injection pump Dispersion cm3/:0.40: PES6P110A720RS3086 Pump designation 1/min: 400 Governor 2nd speed Governor design. Contr.-rod trav. m: 6,1 : RSV400...1050P0/492 Del.quantity cm3/: 1,9...2,5 Dispersion cm3/: 0,40 Customer-spec. information Customer : JOHN DEERE SLEEVE POSITION : 6619 A Engine Control-lever position Degree: LOSE TEST BENCH REQUIREMENTS 17min: 800 Speed Cont.-rod travelmm: 0,3...1.0 Calibrating-oil inlet temp. °C : 38...42 Governor-spring reload Notch setting x : -Overflow valve : 1 457 413 010 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Inlet press., bar: 1.5 Speed 1/min: 1050 Charge press. hPa : 100 Calibrating nozzle-holder Del.quantity cm3/: 213.5...215.5 1000H.: (210,5...218,5) assembly : 0 681 343 009 Opening pressure, bar : 175 HIGHEST RATED SPEED 1st version Control-lever Test inj. tubing : 1 680 750 015 position degrees: 38...46 Outside diameter Testing: x Wall thickness 1st c-rod trav.mm: 12,9 Speed 1/min: 1090...1100 x Length mm : 6,00x1,50x600 2nd c-rod trav.mm : 4,0 Speed 1/min: 1185...1215 4th speed 1/min: 0.3...1,7 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. C-rod trav.mm : 1280 per values ____ LOWEST RATED SPEED I START OF DELIVERY Control-lever position degrees: 17...25 Setting point w/out aux. spring Speed 1/min: 400 Contr.-rod trav.mm: 5,5...5,7 Speed 1/min: 400 Prestroke mm : 3,45...3,55 : (3,40...3,60)
Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 C-rod trav.mm : 6,0...6,2 mm : 2.0 1/min : 540...600 C-rod trav.mm Speed SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) TORQUE CONTROL

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Torque-control curve - 1st version
1st speed 1/min: 1050
C-rod trav.mm: 13.9
2nd speed 1/min: 700
   C-rod trav.mm : 14,35...14,65
 compensator (LDA, ADA, ALDA)
1st version
Setting
               1/min : 500
Speed
Pressure
              hPa : 48
Contr.-rod trav.mm: 13,65...13,75
Measurement
                1/min : 500
Speed
1st pressure hPa : 27
  C-rod trav.mm : 12,10...12,50
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 100
Speed
                1/min : 700
Del.quantity cm3/: 223,5...226,5
1000H: (220,0...230,0)

Speed 1/min: 500

Del.quantity cm3/: 142,5...145,5

1000H: (139,0...149,0)
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SD ang. spacing CS: 0-45-90-135-180-225-
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                                         270-315
                                                    Tolerance + - 0
                                                                      : 0,5(0,75)
Note inst. in remarks column
                                                    SD mark cyl. no. : 8
                   : DEE 15.6 B1
Test sheet
Edition
                   : 7.86
                                                    BASIC SETTING
Superceeded
Calibrating oil : ISO-4113
                                                    1st speed
                                                                  1/mi: 1050
Combination no. : 9 400 231 102
                                                    Contr.-rod trav.mm: 11.3
Injection pump
Pump designation : PES8P110A120RS3089
                                                    Del.quantity cm3/: 16,8...17,0
Governor
                                                    Dispersion
Governor design. : RSV425...1050P2/494
                                                                 cm3/:0.40
Customer-spec. information
                                                    2nd speed
                                                                 1/min: 425
                                                    Contr.-rod trav. m: 4,5
Del.quantity cm3/: 1,2...1,7
Dispersion cm3/: 0,45
                  : JOHN DEERE
Customer
                   : 8955 A
Engine
1st version kW : 270
                                                    SLEEVE POSITION
                                                    Control-lever position
        1/min: 2100
Speed
                                                                Degree: LOSE
TEST BENCH REQUIREMENTS
                                                                 17min: 800
                                                    Speed
                                                    Cont.-rod travelmm: 0,3...1,0
Calibrating-oilinlet temp. ©
                  : 38...42
                                                    Governor-spring reload
                                                    Notch setting x : -
Overflow valvé
                   : 1 457 413 010
                                                    FULL-LOAD DELIV. AT FULL-LOAD STOP
                                                    1st version
Inlet press., bar: 1.5
                                                                 1/min: 1050
                                                    Speed
                                                    Charge press. hPa : 670
Calibrating nozzle-holder
                                                    Del.quantity cm3/: 168,0...170,0
1000H.: (166,0...172,0)
                 : 0 681 343 009
 assembly
Opening
pressure, bar : 172...175
                                                   HIGHEST RATED SPEED
                                                    1st version
                                                    Control-lever
Test inj. tubing : 1 680 750 015
                                                     position degrees: 44...52
Outside diameter
                                                    Testing:
                                                    1st c-rod trav.mm : 10.3
Speed 1/min : 1095...1105
2nd c-rod trav.mm : 4.0
x Wall thickness
              : 6,00x1,50x600
x Length mm
                                                      Speed 1/min: 1170...1200
(A) Injection pump setting values
                                                                1/min : 1300
                                                    4th speed
    Insp. values in parentheses
                                                      C-rod trav.mm : 0,3...1.7
    Set constant delivery quant.
    per values
                                                   LOWEST RATED SPEED I
                                                    Control-lever
START OF DELIVERY
                                                    position degrees: 21...29
                                                    Setting point w/out aux. spring
Prestroke mm : 3,45...3,55
Contr.-rod trav.mm: 10,5
                                                    Speed 1/min : 400
Cam sequence : 1-5-6-3-4-2-7-8
                                                   Contr.-rod trav.mm: 3,9...4,1
                                                    Testing:
                                                            1/min : 100
                                                    Speed
```

C-rod trav.mm min: 19,0 Speed 1/min : 400 C-rod trav.mm : 4,4...4,6 mm : 2.0 1/min : 580...640 C-rod trav.mm Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1050 C-rod trav.mm : 11.30 2nd speed 1/min : 750 C-rod trav.mm : 12,15...12,45 compensator (LDA, ADA, ALDA) 1st version Setting 1/min : 550 hPa : 380 Speed Pressure Contr.-rod trav.mm: 11,50...11,60 Measurement 1/min: 550 Speed 1st pressure hPa : 240 C-rod trav.mm : 10,70...11,10 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 670 1/min : 750 Del.quantity cm3/: 181,5...184,5 1000H.: (178,5...187,5) Speed 1/min: 550 Del.quantity cm3/: 125,0...129,0 1000H.: (123,0...132,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS 270-315 Tolerance + - 0 : 0,5(0,75) Note inst. in remarks column BASIC SETTING Test sheet : IHC 9,4 A2 Edition : 7.86 1/mi: 1200 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 11,0 Combination no. : 9 400 231 114 Del.quantity cm3/: 12,5...12,7 cm3/:0.40Injection pump Dispersion Pump designation : PES8P100A921/5RS286 100H.: (0,60) Governor Governor design. : RQV350...1200PA643K 1/min: 350 2nd speed Customer-spec. information Contri-rod trav. m: 5,0 Del.quantity cm3/: 1.8...2,2 Dispersion cm3/: 0.50 100H:: (0.55) Customer : IHC Engine : DVT 800 TEST BENCH REQUIREMENTS SLEEVE POSITION Control-lever position Calibrating-oil inlet temp. °C Degree: MAX : 38...42 17min: 1200 Speed Cont.-rod travelmm: 15,2...17,8 Over flow valve : 1 417 413 040 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 2.8 1st version 1/min: 1200 Speed Charge press. hPa : 930 Calibrating nozzle-holder Del.quantity cm3/: 125,0...127,0 : 1 688 901 017 assembly 1000H.: (123,0...129,0) Opening : 207...210 HIGHEST RATED SPEED pressure, bar 1st version Perforated-plate Control-lever position degrees: 61,5...66,5 diameter mm : 0,6 Testing: Test inj. tubing : 9 681 230 713 1st c-rod trav.mm : 10,0 1/min : 1240...1250 Speed speed 1/min: 1315...1345 4th speed 1/min: 1700 Outside diameter x Wall thickness : 6,00X2,00X1000 x Length mm C-rod trav.mm : 0...1.0 (A) Injection pump setting values Insp. values in parentheses LOWEST RATED SPEED I Set constant delivery quant. Control-lever position degrees: 9,5...14,5 per values ____ Setting point w/out aux. spring START OF DELIVERY Speed 1/min : 350 Contr.-rod trav.mm: 4,9...5,1 Prestroke mm : 2,7...2,8 Cam sequence : 1-8-4-2-7-3-6-5 Cam sequence Testing: 1/min : 350 Speed C-rod trav.mm min : 5,0 1/min : 285 Speed SD ang. spacing CS: 0-45-90-135-180-225-C-rod trav.mm : 5,8...7,2 **G22**

C-rod trav.mm : 2.0 Speed 1/min : 640...700 TORQUE CONTROL Dimension a mm : 0,05 Torque-control curve - 1st version 1st speed 1/min : 1200 C-rod trav.mm : 11,0 2nd speed 1/min : 900 C-rod trav.mm : 10,95...11,05 compensator (LDA, ADA, ALDA) 1st version Setting Speed 1/min: 800 Pressure hPa : 160 Contr.-rod trav.mm: * SWITCH-OVER POINT 1/min : 220...280 Speed FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa: 930 Speed 1/min : 900 Del.quantity cm3/: 120.0...126.0 1000H.: (119.0...127.0) Speed 1/min: 800 Del.quantity cm3/: 86,5...94,5 Remarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-45-90-135-180-225-Note inst. in remarks column 270-315 Tolerance + - 0 : 0,5(0,75) : DEE 15,6 C Test sheet : 7.86 Edition SD mark cyl. no. Superceeded Calibrating oil BASIC SETTING : ISO-4113 Combination no. : 9 400 231 160 1st speed 1/mi: 1050 Injection pump Contr.-rod trav.mm: 12,6 : PES8P120A320/3RS6014 Pump designation Del.quantity cm3/ : 24,5...24,7 Governor Governor design. : RSV400...1050P0/502 cm3/:0,50Dispersion Customer-spec. information : JOHN DEERE 100H.: (0,90) Customer Engine : 8955 A 1/min: 400 2nd speed Contr.-rod trav. m: 4,5
Del.quantity cm3/: 1,8...2,4
Dispersion cm3/: 0,80 TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C 100H.: (1,20) : 38...42 SLEEVE POSITION Overflow valve Control-lever position : 1 457 413 010 Degree: LOSE 17min: 800 Speed Cont.-rod thelemm: 0,3...1,0 Inlet press., bar : 1.5 Calibrating nozzle-holder Governor-spring reload : 1 688 901 017 Notch setting x : assembly FULL-LOAD DELIV. AT FULL-LOAD STOP Opening : 207...210 pressure, bar 1st version Speed 1/min: 1050 Charge press. hPa: 1070 Del.quantity cm3/: 245.0...247.0 1000H.: (242,0...250,0) Perforated-plate diameter mm : 0,6 Test inj. tubing : 1 680 750 067 HIGHEST RATED SPEED Outside diameter 1st version x Wall thickness Control-lever : 6,00x1,50x1000 x Length mm position degrees: 41...49 (A) Injection pump setting values Testing: Insp. values in parentheses 1st c-rod trav.mm : 11,6 Set constant delivery quant. 1/min : 1090...1100 Speed 2nd c-rod trav.mm : 4.0 Speed 1/min : 1160...1190 per values ____ START OF DELIVERY 4th speed 1/min: 1300 C-rod trav.mm : 0,3...1,7 Prestroke mm : 3,45...3,55 : (3,40...3,60)
Contr.-rod trav.mm: 10,5 LOWEST RATED SPEED I Control-lever Cam sequence : 1-5-6-3-4-2-7-8 position degrees: 19...27 Setting point w/out aux. spring Speed 1/min : 400

Contr.-rod trav.mm: 3,9...4,1 Testing: 1/min : 100 Speed C-rod trav.mm min: 19,0 Speed 1/min : 400 : 4,4...4,6 C-rod trav.mm : 2,0 C-rod trav.mm Speed 1/min : 480...540 compensator (LDA, ADA, ALDA) 1st version Setting 1/min : 550 Speed hPa : 710 Pressure Contr.-rod trav.mm: 12,35...12,45 Measurement Speed 1/min : 550 C-rod trav.mm : 11,20 2nd pressure hPa : 530 C-rod trav.mm : 11,40...11,800 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa: 1070 Speed 1/min: 750 Speed 1/min: 550 Del.quantity cm3/: 182,0...188,0 1000H.: (179,0...191,0) Remarks:

TOMO! TO

BOSCH INJ. PUMP TEST SPECIFICATIONS	
Note inst. in remarks column	SD ang. spacing ^o CS: 0-45-90-135-180-225- 270-315
	Tolerance + - ° : 0,5(0,75)
Test sheet : DEE 15,6 B Edition : 7.86 Superceeded : -	SD mark cyl. no. : 8
Combination nc. : 9 400 231 189	BASIC SETTING
Injection pump	1st speed
Pump designation : PES8P110A12ORS3089	Contrrod trav.mm: 11,3
Governor design. : RSV4251050P2/494- Governor design. : 2	Del.quantity cm3/: 16,817,0
Customer-spec. information	Dispersion cm3/: 0,40
Customer : JOHN DEERE	100H.: (0,75)
Engine : 8955 A	2nd speed 1/min: 425 Contrrod trav. m: 4,5
1st version kW : 270 Speed 1/min: 2100	Del.quantity cm3/ : 1,21,7 Dispersion cm3/ : 0,45
TEST BENCH REQUIREMENTS	100H.: (0,75)
Calibrating-oil inlet temp. °C : 3842	SLEEVE POSITION Control-lever position Degree: LOSE
Overflow valve : 1 457 413 010	Speed 17min: 800 Controd travelmm: 0,31,0
Inlet press., bar : 1.5	Governor-spring reload Notch setting x :-
Calibrating nozzle-holder seembly : 0 681 343 009	FULL-LOAD DELIV. AT FULL-LOAD STOP
Opening pressure, bar : 172175	1st version Speed 1/min: 1050 Charge press. hPa : 670 Del.quantity cm3/ : 168,0170,0 1000H.: (165,0173,0)
Test inj. tubing : 1 680 750 015	HIGHEST RATED SPEED
Outside diameter	1st version Control-lever
x Length mm : 6,00x1,50x600	position degrees: 4452
(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values	Testing: 1st c-rod trav.mm : 10,3 Speed 1/min : 10951105 2nd c-rod trav.mm : 4,0 Speed 1/min : 11851195
START OF DELIVERY	4th speed 1/min: 1300
Prestroke mm : 3,453,55 (3,403,60) (C-rod trav.mm : 0,31,7 LOWEST RATED SPEED I Control-lever position degrees: 2331 Setting point w/out aux. spring Speed 1/min : 425
G26	

```
Contr.-rod trav.mm: 3,9...4,1
Speed 1/min: 425
                 : 4,4...4,6
C-rod trav.mm
                      : 2.0
C-rod trav.mm
              1/min : 550...610
Speed
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min: 1050
C-rod trav.mm: 11.3
2nd speed 1/min: 700
  C-rod trav.mm : 12,85...13,05
 compensator (LDA, ADA, ALDA)
1st version
Setting
              1/min : 550
hPa : 480
Speed
Pressure
Contr.-rod trav.mm: 12,40...12,50
Measurement
              1/min : 550
Speed
1st pressure hPa : 140
  C-rod trav.mm : 10,15...10,55
C-rod trav.mm : 9,3
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa: 670
              1/min : 700
Speed
Del.quantity cm3/: 193.0...199.0
1000H.: (192.0...202.0)
Speed 1/min: 550
Del.quantity cm3/: 125,0...129,0
              1000H.: (122,0...132,0)
Remarks:
```

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING : DEE 7,6 G6 Test sheet : 7.86 Edition 1st speed 1/mi: 800 Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 12,9 Combination no. : 9 400 231 195 Del.quantity cm3/: 17,9...18,2 Injection pump Dispersion cm3/:0,40Pump designation : PES6P110A720RS3083-1 100H.: (0,75) Governor : RSV400...900P7A455-2 Governor design. 1/min: 400 2nd speed Contr.-rod trav. m: 5,5 Customer-spec. information Del.quantity cm3/: 0,8...1,3 Dispersion cm3/: 0,45 : JOHN DEERE Customer : 6466 AF 100H.: (0,75) Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Control-lever position Calibrating-oil inlet temp. OC Degree: LOSE : 38...42 17min: 800 Speed Cont.-rod travelmm: 0.3...1.0 Overflow valve : 1 457 413 010 Governor-spring reload Notch setting x : -Inlet press., bar : 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Speed 1/min: 800 Del.quantity cm3/: 178,5...181,5 Opening pressure, bar : 172...175 10COH.: (176,0...184,0) HIGHEST RATED SPEED Test inj. tubing : 1 680 750 015 1st version Control-lever Outside diameter position degrees: 53...61 x Wall thickness : 6,00x1,50x600 x Length mm Testing: 1st c-rod trav.mm : 11.9 Speed 1/min : 915...925 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4,0 1/min : 965...995 Speed 1/min : 1050 per values 4th speed C-rod trav.mm : 0,3...1,7 START OF DELIVERY LOWEST RATED SPEED I : 3,45...3,55 : (3,40...3,60) Control-lever Prestroke mm position degrees: 24...32 Contr.-rod trav.mm: 10,5 Setting point w/out aux. spring Cam sequence : 1-5-3-6-2-4 1/min : 400 Contr.-rod trav.mm: 4,9...5,1 Testina: SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75)

1/min : 100

C-rod trav.mm min: 19.0

Speed

BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING : DEE 7,6 G4 Test sheet Edition : 7.86 1/mi: 1050 1st speed Superceeded Contr.-rod trav.mm: 12,4 Combination no. : 9 400 231 196 Del.quantity cm3/: 14,7...15,0 Injection pump Pump designation : PES6P110A720RS3038 Dispersion cm3/:0,40Governor Governor design. : RSV400...1050P2A488-100H.: (0,75) Governor design. : 3 2nd speed 1/min: 400 Contri-rod trav. m: 6,7 Customer-spec. information Del.quantity cm3/: 1,4...1,9 Dispersion cm3/: 0,45 : JOHN DEERE Customer 100H.: (0,75) Engine : 6466 AF TEST BENCH REQUIREMENTS SLEEVE POSITION Control-lever position Calibrating-oil inlet temp₂ OC Degree: LOSE : 38...42 17min: 800 Speed Cont.-rod travelmm: 0,3...1,0 Overflow valve : 1 457 413 010 Governor-spring reload Notch setting x : -Inlet press., bar: 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Speed 1/min: 1050 Charge press. hPa : 1200 Opening Del.quantity cm3/: 146,0...149,0 pressure, bar : 172...175 1000H.: (144,0...152,0) Test inj. tubing : 9 681 230 705 HIGHEST RATED SPEED 1st version Outside diameter Control-lever position degrees: 41...49 x Wall thickness : 6,00x1,50x600 x Length mm Testing: 1st c-rod trav.mm : 11,4 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 1/min : 1095...1105 Speed 2nd c-rod trav.mm : 4,0 î/min : 1185...1215 per values Speed 1/min : 1300 4th speed START OF DELIVERY C-rod trav.mm : 0,3...1,7 : 3,45...3,55 : (3,4...3,6) LOWEST RATED SPEED I Prestroke mm Control-lever Contr.-rod trav.mm: 10,5 position degrees: 19...27 Cam sequence : 1-5-3-6-2-4 Setting point w/out aux. spring 1/min : 400 Contr.-rod trav.mm: 6,1...6,3 SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) Testing: Speed 1/min : 100 HOZ

C-rod trav.mm min : 19,0 Speed 1/min : 400 : 6,6...6,8 C-rod trav.mm : 2,0 C-rod trav.mm 1/min : 660...720 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1050 C-rod trav.mm : 12,40 2nd speed 1/min : 700 C-rod trav.mm : 13,55...13,85 compensator (LDA,ADA,ALDA) 1st version Setting 1/min : 500 Speed hPa : 670 Pressure Contr.-rod trav.mm: 12,85...12,95 Measurement Speed 1/min : 500 C-rod trav.mm : 10,44 2nd pressure hPa : 310 C-rod trav.mm : 11,20...11,60 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 1200 1/min : 700 Speed Del.quantity cm3/: 179,0...183,0 1000H.: (176,0...186,0) 1/min : 500 Speed Del.quantity cm3/: 91.0...95.0 1000H:: (88.0...98.0)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 Test sheet : DEE 7,6 G5 : 7.86 Edition BASIC SETTING Superceeded Calibrating oil : ISO-4113 1/mi: 1100 1st speed Combination no. : 9 400 231 197 Contr.-rod trav.mm: 12,4 Injection pump Del.quantity cm3/: 14,6...14,9 Pump designation : PES6P110A720RS3083-1 cm3/:0,40Governor Dispersion Governor design. : RSV600...1100P2/489-100H.: (0,75) Customer-spec. information 2nd speed 1/min: 600 Customer : JOHN DEERE Contr.-rod trav. m: 6,3 Del.quantity cm3/: 2,3...2,8 Dispersion cm3/: 0,50 100H.: (0,75) : 6466 A Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position : 38...42 Degree: LOSE Speed 17min: 800 Overflow valve Cont.-rod travelmm: 0,3...1,0 : 1 457 413 010 Governor-spring reload Inlet press., bar: 1.5 Notch setting x : -FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Opening 1/min: 1100 Speed Charge press. hPa: 1200
Del.quantity cm3/: 146,0...149,0
1000H.: (143,5...151,5) pressure, bar : 172...175 Test inj. tubing : 9 681 230 705 HIGHEST RATED SPEED 1st version Outside diameter x Wall thickness Control-lever x Length mm : 6,00x1,50x600 position degrees: 47...55 Testing: (A) Injection pump setting values 1st c-rod trav.mm : 11.4 Speed 1/min : 1145...1155 Insp. values in parentheses Set constant delivery quant. 2nd c-rod trav.mm : 4,0 per values 1/min : 1245...1275 Speed START OF DELIVERY 4th speed 1/min : 1350 C-rod trav.mm : 0,3...1,7 Prestroke mm : 3,45...3,55 : (3,40...3,60)
Contr.-rod trav.mm: 10,5 LOWEST RATED SPEED I Control-lever

position degrees: 27...35
Setting point w/out aux. spring

Contr.-rod trav.mm: 5,7...5,9

Speed 1/min: 600

Cam sequence : 1-5-3-6-2-4

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Testing:
Speed 1/min: 100
C-rod trav.mm min: 19.0
            1/min : 600
Speed
C-rod trav.mm : 6,2...6,4
             mm : 2.0
1/min : 790...850
C-rod trav.mm
Speed
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1100
C-rod trav.mm : 12.4
2nd speed 1/min : 950
C-rod trav.mm : 12.85...13.05
3rd speed 1/min : 850
  C-rod trav.mm : 13,15...13,35
 compensator (LDA, ADA, ALDA)
1st version
Setting
             1/min : 500
hPa : 570
Speed
Pressure
Contr.-rod trav.mm: 12,25...12,35
Measurement
             1/min : 500
Speed
1st pressure hPa : 240
  C-rod trav.mm : 9,70...10,10
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 1200
             1/min : 850
Del.quantity cm3/: 162,0...166,0
              1000H.: (159,0...169,0)
 i
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SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : DEE 10,1 C2 Test sheet Edition : 7.86 BASIC SETTING Superceeded 1/mi: 1050 : ISO-4113 Calibrating oil 1st speed : 9 400 231 204 Contr.-rod trav.mm: 13,6...13,7 Combination no. Del.quantity cm3/: 21,7...22,0 Injection pump Pump designation : PES6P110A720RS3144 cm3/: 0,40Dispersion Governor Governor design.: RSV400...1050P0A492-100H.: (0,75) 2nd speed 1/min: 400 Contr.-rod trav. m: 5,8...6,0 Del.quantity cm3/: 2,0...2,5 Dispersion cm3/: 0,45 100H.: (0,75) Customer-spec. information : JOHN DEERE Customer : 6619 A Engine TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-oil inlet temp. °C Control-lever position Degree: LOSE : 38...42 17min: 800 Cont.-rod travelmm: 0,3...1.0 Overflow valve : 1 457 413 010 Governor-spring reload Notch setting x : -Inlet press., bar: 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 assembly 1st version Speed 1/min: 1050 Charge press. hPa: 1200 Del.quantity cm3/: 216,5...219,5 Opening pressure, bar : 172...175 1000H.: (214,0...222,0) Test inj. tubing : 9 681 271 004 HIGHEST RATED SPEED 1st version Outside diameter Control-lever x Wall thickness position degrees: 41...49 : 6,00x1,50x600 x Length mm Testing: (A) Injection pump setting values 1st c-rod trav.mm : 12.6 Speed 1/min : 1100...1110 2nd c-rod trav.mm : 4.0 Insp. values in parentheses Set constant delivery quant. per values ____ 1/min : 1170...1200 Speed 4th speed 1/min: 1280 START OF DELIVERY C-rod trav.mm : 0,3...1,7 : 3,45...3,55 Prestroke mm : (3,40...3,50) LOWEST RATED SPEED I Contr.-rod trav.mm: 10,5 Control-lever Cam sequence : 1-5-3-6-2-4 position degrees: 19...27 Setting point w/out aux. spring Speed 1/min : 400 Contr.-rod trav.mm: 5,3...5,5

Testing:
Speed 1/min: 100
C-rod trav.mm min: 19,0
Speed 1/min: 400
C-rod trav.mm: 5,8...6,0
C-rod trav.mm: 2,0
Speed 1/min: 535...595

TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min: 1050
C-rod trav.mm: 13,5...13,7
2nd speed 1/min: 750
C-rod trav.mm: 14,4...14,6

FUEL-DELIVERY CHARACTERISTICS

1st version
Charge press. hPa: 1200
Speed 1/min: 750
Del.quantity cm3/: 229,0...233,0
1000H.: (226,0...236,0)
Speed 1/min: 500
1/min: 500
1000H.: (155,0...165,0)

kemarks

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD mark cyl. no. : 1 : DEE 10,1 C1 Test sheet : 7.86 BASIC SETTING Edition Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1050 Combination no. : 9 400 231 204 Contr.-rod trav.mm: 13,6 Injection pump Del.quantity cm3/: 21,7...22,0 Pump designation : PES6P110A720RS3144 cm3/:0.40Dispersion Governor Governor design. : RSV400...1050P0/492-100H.: (0,75) 2nd speed 1/min: 400 Contr.-rod trav. m: 5.8 Del.quantity cm3/: 2.0...2.5 Customer-spec. information : JOHN DEERE Customer : 6619 A Dispersion cm3/:0,45Engine 100H.: (0.75) TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-cil inlet temp. C Control-lever position : 38...42 Degree: LOSE 17min: 800 Cont.-rod travelmm: 0,3...1,0 Overflow valve : 1 457 413 010 Governor-spring reload Notch setting x : -Inlet press., bar : 1.5 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder assembly : 0 681 343 009 1st version Speed 1/min: 1050 Charge press. hPa: 1200 Del.quantity cm3/: 216,5...219,5 Opening pressure, bar : 172...175 1000H.: (214,0...222,0) cm3/ : 4,0 Test inj. tubing : 9 681 230 705 Dispersion 1000H.: (7.5) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6,00x1,50x600 1st version x Length mm Control-lever (A) Injection pump setting values position degrees: 41...49 Insp. values in parentheses Set constant delivery quant. Testing: per values 1st c-rod trav.mm : 12,6 1/min : 1100...1110 Speed START OF DELIVERY 2nd c-rod trav.mm : 4,0 Speed 1/min: 1170...1200 4th speed 1/min: 1280 Prestroke mm : 3,45...3,55 : (3,4...3,5) Contr.-rod trav.mm: 10,5 C-rod trav.mm : 0,3...1,7 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever position degrees: 19...27 Setting point w/out aux. spring Speed 1/min : 400

```
Contr.-rod trav.mm: 5,2...5,4
Testing:
Speed
              1/min : 100
C-rod trav.mm min: 19,0
             1/min : 400
Speed
C-rod trav.mm
                 : 5,7...5,9
             mm : 2.0
1/min : 535...595
C-rod trav.mm
Speed
TORQUE CONTROL
Torque-control curve - 1st version
1st speed
            1/min : 1050
C-rod trav.mm : 13,60
2nd speed 1/min : 750
  C-rod trav.mm : 14,30...14,40
 compensator (LDA,ADA,ALDA)
1st version
Setting
              1/min : 500
Speed
             hPa : 720
Pressure
Contr.-rod trav.mm: 13,95...14,05
Measurement
             1/min : 500
Speed
C-rod trav.mm : 11.30
2nd pressure hPa : 240
  C-rod trav.mm : 12,00...12,40
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 1200
Speed 1/min : 750
Del.quantity cm3/: 229,0...233,0
1000H.: (226,0...236,0)
              1/min : 500
Speed
Del.quantity cm3/: 158,0...162,0
1000H.: (155,0...165,0)
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BOSCH INJ. PUMP TEST SPECIFICATIONS SD mark cyl. no. : 1 Note inst. in remarks column BASIC SETTING : DEE 10,1 C Test sheet : 7.86 Edition 1/mi: 1050 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm: 12,9...13,0 Combination no. : 9 400 231 215 Del.quantity cm3/: 21,7...22,0 Injection pump cm3/:0,40Dispersion Pump designation : PES6P110A720RS3144 Governor 1/min: 400 2nd speed Contr.-rod trav. m: 5.1...5.3 Del.quantity cm3/: 2.0...2,5 Dispersion cm3/: 0,45 Governor design. : RSV400...1050P0A513 Customer-spec. information : JOHN DEERE Customer SLEEVE POSITION : 6619 A Engine Control-lever position Degree: LOSE 1/min: 800 TEST BENCH REQUIREMENTS Cont.-rod travelmm: 0,3...1,0 Calibrating-oil inlet temp. OC : 38...42 Governor-spring reload Notch setting x : -Overtlow valve : 1 457 413 010 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.50 1st version 1/min: 1050 Speed Charge press. hPa : 1200 Calibrating nozzle-holder Del.quantity cm3/: 216,5...219.5 1000H.: (214,0...222,0) : 0 681 343 009 assembly Dispersion cm3/ : 4,0 Opening. pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 1 680 750 015 Control-lever position degrees: 41...49 Outside diameter x Wall thickness Testing: : 6,00x1,50x600 ist c-rod trav.mm : 11,9 x Length mm Speed 1/min: 1100...1110 2nd c-rod trav.mm: 4.0 Speed 1/min: 1160...1190 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 1/min : 1280 4th Speed C-rod trav.mm : 0,3...1,4 per values ____ START OF DELIVERY LOWEST RATED SPEED 1 Control-Lever Prestroke mm : 3,45...3,55 : (3,40...3,60) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 position degrees: 21...29 Setting point w/out aux. spring Speed 1/min : 400 Contr.-rod trav.mm: 4,6...4,8 Testing: 1/min : 100 Speed SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) C-rod trav.mm min: 19,0 1/min : 400 Speed

H10

C-rod trav.mm : 5,1...5,3 C-rod trav.mm : 2,0 Speed 1/min : 505...565 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1050 C-rod trav.mm : 12,9...13,0 2nd speed 1/min : 750 C-rod trav.mm : 13,8...14,0 compensator (LDA, ADA, ALDA) 1st version Setting Speed 1/min: 500 Pressure hPa: 720 Contr.-rod trav.mm: 13,15...13,25 Measurement 1/min : 500 Speed 1st pressure hPa : 240 C-rod trav.mm : 11,3...11,7 C-rod trav.mm : 10,7...10,9 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 1200 Speed 1/min : 750 Del.quantity cm3/: 229.0...233.0 1000H:: (226.0...236.0) Speed 1/min: 500 Del.quantity cm3/: -1000H.: -

BOSCH INJ. PUMP TEST SPECIFICATIONS BASIC SETTING Note inst. in remarks column 1st speed 1/mi: 1400 Test sheet : MB 5,7 V 17 Contr.-rod trav.mm: 12.15...12.25 : 19.12.86 Edition Superceeded : 1.84 Del.quantity cm3/ : 7.0...7.1 Calibrating oil : ISO-4113 100H.: (-) Combination no. : 9 407 083 267 cm3/:0.3Dispersion Injection pump 100H.: (0.5) Pump designation : PES6A90D410RS2596 Governor Governor design. : RQV300...1400AB1145L 2nd speed 1/min: 300 Contr.-rod trav. m: 9.4...9.6 Del.quantity cm3/: 1.2...1.6 Customer-spec. information Customer : DAIMLER-BENZ 100H.: (-) cm3/: 0.25 100H.: (0.45) Dispersion : OM 352A Engine (B) Setting of injection pump with TEST BENCH REQUIREMENTS externally-mounted governor Calibrating-oil inlet temp. OC : 40...45 SLEEVE TRAVELS 1st speed 1/min: 400 Sleeve travel mm: 1.60...1.80 Overflow valve : 1 417 413 000 2nd speed 1/min: 800 Sleeve travel mm: 4.35...4.50
3rd speed 1/min: 1400
Sleeve travel mm: 7.65...7.75 Inlet press., bar : 1.00 Calibrating nozzle-holder : 0 681 343 009 SLEEVE POSITION assembly Control-lever position Degree: -3 Opening pressure, bar : 172...175 1/min: 1500 Speed Cont.-rod travelmm: 15.20...17.80 Test inj. tubing : 1 680 750 014 FULL-LOAD DELIV. AT FULL-LOAD STOP Charge press. hPa: 1400
Del.quantity cm3/: 70.0...71.0
1000H: (68.0...73.0)
Dispersion cm3/: 3.0 Outside diameter x Wall thickness x Length mm : 6,00x2,00x600 1000H.: (5.0) (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. HIGHEST RATED SPEED 1st version per values ____ Control-lever position degrees: 61...69 START OF DELIVERY Testing: : 2.00...2.10 1st c-rod trav.mm : 11.15 Prestroke mm Speed 1/min: 1440...1450 : (1.95...2.15) : 1-5-3-6-2-4 2nd c-rod trav.mm : 4.00 Cam sequence Speed 1/min: 1570...1600 4th speed 1/min : 1750 C-rod trav.mm : 0.00...1.00 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.5(0.75) LOWEST RATED SPEED I Control-lever

position degrees: 20...28

Testing:

Speed 1/min : 100 C-rod trav.mm min : 11.00 Speed 1/min : 300

C-rod trav.mm : 9.40...9.60 C-rod trav.mm : 2.00 Speed 1/min : 570...630

SWITCH-OVER POINT

Speed 1/min : 220(240)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 500 Del.quantity cm3/: 51.7...53.7 1000H.: (49.2...56.2)

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9,0...12,0 Cam sequence : 1-5-3-6-2-4 Note inst. in remarks column Test sheet : MB 5,7 N 13 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0,5(0,75) : 19.09.86 Edition Superceeded : 01.86 Calibrating oil : ISO-4113 BASIC SETTING : 9 407 083 270 Combination no. 1st speed i/mi: 1400 Injection pump Pump designation : PES6A90D410RS2293 Contr.-rod trav.mm: 11,0...11,1 EP type number : 0 410 896 031 Del.quantity cm3/: 7,1...7,2 Governor Governor design. : RQV300...1400AB740-1 100H.: (6,9...7,4) Governer no. : 9 420 080 153 cm3/:0.3Dispersion Customer-spec. information 100H.: (0,5) : DAIMLER-BENZ Customer 2nd speed 1/min: 300 Contr.-rod trav. m: 7,4...7,6 Del.quantity cm3/: 1,0...1,6 : OM 352 A Engine 1st version kW : 118 100H.: (0.9...1,7) cm3/: 0,25 1/min: 2800 Speed Dispersion TEST BENCH REQUIREMENTS 100H.: (0,45) (B) Setting of injection pump with Calibrating-oil inlet temp. °C externally-mounted governor : 38...42 Overflow valve SLEEVE TRAVELS : 1 417 413 047 1st speed 1/min: 300 Sleeve travel mm: 0,7...1,2 2nd speed 1/min: 550 Sleeve travel mm: 2,7...3,0 3rd speed 1/min: 775 Inlet press., bar : 1.0 Calibrating nozzle-holder Sleeve travel mm: 4.1...4,6
4th speed 1/min: 950
Sleeve travel mm: 5,2...5,5 : 0 681 343 009 assembly Opening pressure, bar : 172...175 5th speed 1/min: 1460 Sleeve travel mm: 8,4...8,6 Test inj. tubing : 1 680 750 014 SLEEVE POSITION Cortrol-lever position Degree: MAX. Outside diameter Speed 17min: 1420 Cont.-rod travelmm: 15,2...17,8 x Wall thickness x Length mm : 6,00X2,00X600 FULL-LOAD DELIV. AT FULL-LOAD STOP (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 1st version per values 1/min: 1400 Speed Del.quantity cm3/: 71,0...72,0 1000H.: (69,0...74,0) cm3/: 3.0 1000H.: (5,0) START OF DELIVERY Test pressure, bar: 25...27 Dispersion : 2,25...2,25 Prestroke mm : (2,10...2,30) HIGHEST RATED SPEED

H14

1st version Control-lever

position degrees: 54...62

Testing:

1st c-rod trav.mm: 10,0

1/min : 1440...1450 Speed

2nd c-rod trav.mm: 4.0 Speed 1/min: 1565...1595 4th speed 1/min: 1700 C-rod trav.mm: 0...1,0

LOWEST RATED SPEED I

Control-lever

position degrees: 10...18

Testing:

1/min : 100 Speed

C-rod trav.mm min : 9.0 Speed 1/min : 300 C-rod trav.mm : 7,4...7,6

CONSTANT REGULATION

1/min : 320...550 Speed

SWITCH-OVER POINT

Speed 1/min : 220(240)

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 500 Del.quantity cm3/: 53,0...56,0 1000H.: (51,0...58,0)

BOSCH INJ. PUMP TEST SPECIFICATIONS 1st speed 1/mi: 1400 Note inst. in remarks column Contr.-rod trav.mm: 10,1...10,2 Test sheet Edition : FOR 4,4 B : 7.86 Del.quantity cm3/: 6,65...6,75 Superceeded Calibrating oil : ISO-4113 Dispersion cm3/:0.30Combination no. : 9 407 083 272 100H.: (0,45) 2nd speed 1/min: 350 Contr.-rod trav. m: 6,90...7,10 Del.quantity cm3/: 0,85...1,25 Injection pump Pump designation : PES4A90D410RS2632 Governor Governor design. : RS350/1400A2B2149L SLEEVE POSITION Control-lever position Customer-spec. information Cwstomer : FORD Degree: -Speed 17min: 800 Engine : FT0329 Cont.-rod travelmm: 0,3-1,0 Governor-spring reload Notch setting x : 5,75 TEST BENCH REQUIREMENTS Overflow valve : 1 417 413 000 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 1.0 1st version 1/min: 1400 Speed Del.quantity cm3/: 66.5...67.5 1000H.: (64.5...69.5 Dispersion cm3/: 3.00 1000H.: (4.50) Calibrating nozzle-holder : 0 681 443 009 assembly Opening pressure, bar : 172 HIGHEST RATED SPEED 1st version Test inj. tubing : 9 681 081 733 Control-lever position degrees: 58...64 Outside diameter x Wall thickness Testing: 1st c-rod trav.mm: 9,10 x Length mm : 6,00x2,00x600 Speed 1/min: 1440...1450 2nd c-rod trav.mm: 4,0 (A) Injection pump setting values 1/min : 1510...1540 Speed Insp. values in parentheses Set constant delivery quant. 4th speed 1/min: 1650 C-rod trav.mm : 0,3...1,7 per values ____ LOWEST RATED SPEED I START OF DELIVERY Control-lever : 2.15...2.25 position degrees: 29...37 Prestroke mm : (2.10...2.30) Setting point w/out aux. spring : 1-3-4-2 1/min : 350 Cam sequence Speed Contr.-rod trav.mm: 7.0
Speed 1/min: 300
C-rod trav.mm: 7.9...8,4
Speed 1/min: 400 SD ang. spacing CS: 0-90-180-270 Tolerance + - 0.50(0.75) TORQUE CONTROL Torque-control curve - 1st version SD mark cyl. no. : 1 1st speed 1/min : 1400 BASIC SETTING C-rod trav.mm : 10,1...10,2 H16

2nd speed 1/min: 1000 C-rod trav.mm: 10,1...10,4 3rd speed 1/min: 800 C-rod trav.mm: 10,25...10,45 4th speed 1/min: 500 C-rod trav.mm: 10,4...10,5 FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 1000 Del.quantity cm3/: 63,0...65,0 1000H.: (60,5...67,5) Speed 1/min: 800 Del.quantity cm3/: 58,5...60,5 1000H.: (56,0...63,0) Speed 1/min: 500 Del.quantity cm3/: 53,0...55,0 1000H.: (50,5...57,5)

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

: MB 5,7 U9 Test sheet

Edition : 7.86

Superceeded

Calibrating oil : ISO-4113

: 9 407 083 275 Combination no.

Injection pump

Pump designation : PES6A90D41ORS2569-1

Governor

Governor design. : RQV300...1400AB1160L

Customer-spec. information

: MERCEDES-BENZ Customer

: 0M 352 Engine

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 1 417 413 000

Inlet press., bar : 1.5

Calibrating nozzle-holder

: 0 681 343 909 assembly

Opening

pressure, bar : 175

Test inj. tubing : 1 680 750 014

Outside diameter

x Wall thickness

: 6,00x2,00x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant.

per values ____

START OF DELIVERY

Prestroke mm

: 2,0...2,1 : (1,95...2,15

: 1-5-3-6-2-4 Cam sequence

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0 : 0,5(0,75)

BASIC SETTING

1st speed 1/mi: 1400

Contr.-rod trav.mm: 11,5...11,6

Del.quantity cm3/: 6,1...6,2

Dispersion cm3/:0,30

100H.: (0,45)

1/min: 300 2nd speed

Contr.-rod trav. m: 9,4...9,6

Del.quantity cm3/: 1,0...1,4 Dispersion cm3/: 0,25

100H.: (0,45)

(B) Setting of injection pump with externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 400

Sleeve travel mm: 1,60...1,80

2nd speed 1/min: 800

Sleeve travel mm: 4,35...4,50

3rd speed 1/min: 1400 Sleeve travel mm: 7,65...7,75

SLEEVE POSITION

Control-lever position

Degree: MAX. 1/min: 1500

Cont.-rod travelmm: 15,2...17,8

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

1/min: 1400 Speed

Del.quantity cm3/: 61.0...62.0 1000H.: (59.0...64.0)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 59...67

Testing:

1st c-rod trav.mm : 10,5 Speed 1/min : 1445 2nd c-rod trav.mm : 4,0

1/min : 1560...1590 Speed

4th speed 1/min : 1750

C-rod trav.mm : 0...1,0

LOWEST RATED SPEED I

Control-lever

position degrees: 24...32

Testing:

Speed 1/min : 100 C-rod trav.mm min : 11.0 Speed 1/min : 300 C-rod trav.mm : 9,4...9,6 C-rod trav.mm : 2,0 Speed 1/min : 570...630

TORQUE CONTROL

Dimension a mm : 0,5 Torque-control curve - 1st version

1/min : 1400 1st speed

C-rod trav.mm : 11,50...11,60

2nd speed 1/min : 1150

C-rod trav.mm : 11,65...11,95

3rd speed 1/min : 1050

C-rod trav.mm : 11,90...12,10 4th speed 1/min : 500

C-rod trav.mm : 12,00...12,10

SWITCH-OVER POINT

1/min : 100...220 Speed

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 1050

Del.quantity cm3/: 61,5...63,5 1000H.: (59,0...66,0) Speed 1/min: 500 Del.quantity cm3/: 47,3...49,3 1000H.: (44,8...51,8)

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet : MWM 3.9 B Edition : 18.09.86 Superceeded : 11.85 Superceeded : 11.85 Calibrating oil : ISO-4113 Combination no. : 9 407 083 285 Injection pump Pump designation : PES4A80D320RS1282 EP type number : 9 400 083 056 Governor Governor design. : R\$350/1500A2B2073-1R Governer no. : 9 420 083 186 Customer-spec. information Customer : MWM Engine : D229-4 TEST BENCH REQUIREMENTS Overflow valve : 1 417 413 012 Inlet press., bar: 1.0 Calibrating nozzle-holder : 0 681 343 009 assembly Opening pressure, bar : 172...175 Test inj. tubing : 1 680 750 014 Outside diameter x Wall thickness : 6,00x2,00x600 x Length mm (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____ START OF DELIVERY Test pressure, bar: 25...27

Prestroke mm : 2,15...2,25 : (2,10...2,30) Contr.-rod trav.mm: 9,0...12,0 Cam sequence : 1-3-4-2

SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0,5(0,75)

H20

START OF DELIVERY DIFFERENCE

betw.c-rod trav.mm: 9,0...12,0 & c-rod trav max. : 21,0 Difference CS : 4...5

BASIC SETTING

1/mi: 1480 1st speed

Contr.-rod trav.mm: 9,2...9,3

Del.quantity cm3/ : 5,7...5,8

100H.: (5,5...5,9)

Dispersion cm3/: 0.25

100H.: (0,4)

2nd speed 1/min: 350 Contr.-rod trav. m: 5,9...6,1 Del.quantity cm3/: 0,55...0,85

100H.: (0,4...1,0) cm3/: 0,2

Dispersion 100H.: (Ó,35)

SLEEVE POSITION

Speed 1/min: 800

Cont.-rod travelmm: 0,3...1,0

Governor-spring reload Notch setting x : -

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1480
Del.quantity cm3/: 56.5...57.5
1000H.: (55.0...59.0)
Dispersion cm3/: 2.5

1000H.: (4.0)

HIGHEST RATED SPEED

1st version Control-lever

position degrees: 55...63

Testing:

1st c-rod trav.mm : 8,2 Speed 1/min : 1540...1550

2nd c-rod trav.mm : 4.0 Speed 1/min : 1570...1600 4th speed 1/min : 1700

C-rod trav.mm : 0,3...1,7

LOWEST RATED SPEED I

Control-lever

position degrees: 30...38

```
Setting point w/out aux. spring
            1/min : 350
Speed
Contr.-rod trav.mm: 6.0
Speed 1/min: 350
            .mm : 6,6...7,2
1/min : 1350
C-rod trav.mm
Speed
Corod trav.mm max: 2,6
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1480
C-rod trav.mm : 9,2...9,3
2nd speed 1/min : 500
  C-rod trav.mm : 10,7...10,8
3rd speed 1/min: 800
  C-rod trav.mm : 10,3...10,6
4th speed 1/min: 1000
  C-rod trav.mm : 10,0...10,2
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 500
Del.quantity cm3/: 56.5...58.5
1000H: (54.5...60.5)
              cm3/:-
Dispersion
             1000H.: -
             1/min : 1000
Speed
Del.quantity cm3/: 59,5...61,5
             1000H.: (57,5...63,5)
              cm3/:-
Dispersion
             1000H.: -
```

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0,5(0,75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column BASIC SETTING : MWM 5,9 AS Test sheet : 7.86 Edition 1/mi: 1500 1st speed Superceeded Calibrating oil : ISO-4113 Contr.-rod trav.mm; 9,2...9,3 : 9 407 083 297 Combination no. Del.quantity cm3/: 5,2...5,3 Injection pump Dispersion cm3/: 0.25Pump designation : PES6A80D320RS1271 Governor 100H.: (0,40) Governor design: : RSV350...1500A2B2122 2nd speed 1/min: 350 Contr.-rod trav. m: 6,4...6,6
Del.quantity cm3/: 0,75...1,05
Dispersion cm3/: 0,20
100H.: (0,35) Customer-spec. information Customer : MWM : D 229-6 Engine SLEEVE POSITION TEST BENCH REQUIREMENTS Control-lever position Degree: LOSE Calibrating-oil inlet temp. °C 17min: 800 : 38...42 Cont.-rod travelmm: 0,3...1,0 Overflow valve Governor-spring reload : 1 417 413 D25 Notch setting x : 6.0FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.5 Calibrating nozzle-holder 1st version : 0 681 343 009 1/min: 1500 assembly Speed Del.quantity cm3/: 52,0...53,0 1000H.: (51,0...54,0) Opening. pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 1 680 750 015 Control-lever position degrees: 62...64 Outside diameter x Wall thickness Testing: 1st c-rod trav.mm : 8.2 Speed 1/min : 1530...1540 : 6,00x1,50x600 x Length mm 2nd c-rod trav.mm : 4.0 Speed 1/min : 1600...1630 4th speed 1/min : 1780 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. C-rod trav.mm : 0,3...1.7 per values START OF DELIVERY LOWEST RATED SPEED I Control-lever position degrees: 24...26 Prestroke mm : 2,0...2,3 : (2,15...2,35) Contr.-rod trav.mm: 10,5 Cam sequence : 1-5-3-6-2-4 Setting point w/out aux. spring Speed 1/min: 350 Contr.-rod trav.mm: 5,9...6,1 Testing: 1/min : 100 Speed

C-rod trav.mm min: 19,0

```
1/min : 350
Speed
C-rod trav.mm : 6,4...6,6
C-rod trav.mm
                      : 2,0
              1/min : 620...680
Speed
Speed
              1/min : 800
C-rod trav.mm max : 1,0
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min: 1500
C-rod trav.mm: 9,2...9,3
2nd speed 1/min: 1000
   C-rod trav.mm : 9,75...10,05
3rd speed 1/min : 800
C-rod trav.mm : 9,95...10,15
4th speed 1/min : 500
  C-rod trav.mm : 10,2...10,3
FUEL-DELIVERY CHARACTERISTICS
               1/min : 1000
Speed
Del.quantity cm3/: 52.5...54.5
1000H:: (50.5...56.5)
Speed 1/min: 800
Del.quantity cm3/: 50,5...52,5
1000H.: (48,5...54,5)

Speed 1/min: 500

Del.quantity cm3/: 46,5...48,5

1000H.: (44,5...50,5)
```

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-120-240 Tolerance + - : 0.50 (0.75) Note inst. in remarks column Test sheet : SOA 3,7 A 1 : 14.11.86 Edition BASIC SETTING Superceeded : 4.85 Calibrating oil : ISO-4113 1/mi: 1075 1st speed : 0 400 463 104 Combination no. Contr.-rod trav.mm: 11.00...11.10 Del.quantity cm3/ : 5.0...5.1 Injection pump Pump designation : PES3A80D410/3RS1183 EP type number : 0 410 483 011 100H.: (4.8...5.2) Governor : RSV325...1075A8C492-Governor design. cm3/:0.2Dispersion 1L Governer no. : 0 420 232 478 100H.: (0.3) Customer-spec. information 1/min: 325.0 2nd speed Contr.-rod trav. m: 8.4...8.6 Del.quantity cm3/: 1.0...1.6 100H.: (0.8...1.7) Customer : SONACOME : F3L912 Engine cm3/:0.2Dispersion 100H.: (0.3) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Speed Overflow valve Cont.-rod travelmm: 0.30...0.70 : 1 417 413 000 Inlet press., bar : 1.00 Governor-spring reload Notch setting x : 5.50 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly Opening 1st version pressure, bar : 172...175 1/min: 1075 Speed Del.quantity cm3/: 50.0...51.0 1000H.: (48.5...52.5) cm3/ : 2.00 Test inj. tubing : 1 680 750 014 Dispersion 1000H.: (3.50) Outside diameter x Wall thickness HIGHEST RATED SPEED x Length mm : 6.00x2.00x600 1st version Control-lever position degrees: 50...58 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Testing: per values ____ 1st c-rod trav.mm : 10.00 Speed 1/min: 1115...1125 2nd c-rod trav.mm : 4.00 Speed 1/min : 1155...1185 3rd c-rod trav.mm : 4.00 START OF DELIVERY Test pressure, bar: 25...27 Speed 1/min: 1165...1195 : 1.90...2.00 Prestroke mm : (1.85...2.05) 4th speed 1/min : 1335 Contr.-rod trav.mm: 9.00...12.00 C-rod trav.mm : 0.30...1.40 Cam sequence : 1- 3- 2 LOWEST RATED SPEED I

Control-lever
position degrees: 18...26
Setting point w/out aux. spring
Speed 1/min: 325
Contr.-rod trav.mm: 5.5

Testing:
Speed 1/min: 100
C-rod trav.mm min: 19.50
Speed 1/min: 325
C-rod trav.mm : 5.90...6.10
C-rod trav.mm : 2.00
Speed 1/min: 410...470

TORQUE CONTROL
Dimension a mm : 1.00
Torque-control curve - 1st version
1st speed 1/min: 1075
C-rod trav.mm : 11.00...11.10
2nd speed 1/min: 500
C-rod trav.mm : 12.00...12.10
3rd speed 1/min: 935
C-rod trav.mm : 11.40...11.60

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 2 Note inst. in remarks column Test sheet : KHD 1 G 22 SD ang. spacing CS: 0-120-240 Tolerance + - : 0.50 (0.75) Edition : 09.03.87 Superceeded Calibrating oil : ISO-4113 SD mark cyl. no. : 1 Combination no. : 0 400 463 151 BASIC SETTING Injection pump Pump designation : PES3A80D410/3RS1324 1st speed 1/mi: 1075 EP type number : 0 410 483 017 Contr.-rod trav.mm: 9.80...-9.90 Governor Governor design. : RSV325...1075A8C494-Del.quantity cm3/: 4.2...4.3 ZL : 0 420 232 467 Governer no. 100H.: (4.0...4.4) Customer-spec. information cm3/:0.2Customer Dispersion : F3L912 Engine 100H.: (0.3) 1st version kW : 30.0 2nd speed 1/min: 325.0 Contr.-rod trav. m: 8.6...8.8

Del.quantity cm3/: 0.8...1.4

100H.: (0.6...1.5)

Dispersion cm3/: 0.2 1/min: 2150 Speed TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. ^DC 100H.: (0.3) : 38...42 SLEEVE POSITION Overflow valve Control-lever position : 1 417 413 000 Degree: -3 17min: 800 Cont.-rod travelmm: 0.30...0.70 Inlet press., bar: 1.00 Governor-spring reload Calibrating nozzle-holder assembly : 0 681 343 009 Notch setting x : 5.00 FULL-LOAD DELIV. AT FULL-LOAD STOP Opening pressure, bar : 172...175 1st version Speed 1/min: 1075
Del.quantity cm3/: 42.0...43.0
1000H:: (40.5...44.5)
Dispersion cm3/: 2.50 Test inj. tubing : 1 680 750 014 Outside diameter 1000H.: (3.50) x Wall thickness : 6.00x2.00x600 x Length mm HIGHEST RATED SPEED (A) Injection pump setting values 1st version Insp. values in parentheses Set constant delivery quant. Control-lever position degrees: 48...56 per values Testing: START OF DELIVERY 1st c-red trav.mm : 8.80 Speed 1/min: 1115...1125 Test pressure, bar: 25...27 2nd c-rod trav.mm: 4.00 Speed 1/min: 1140...1170 Prestroke mm : 1.90...2.00 3rd c-rod trav.mm: 4.00 : (1.85...2.05)

H26

Speed 1/min: 1230...1260 4th speed 1/min: 1390 C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I Control-lever

position degrees: 17...25
Setting point w/out aux. spring
Speed 1/min: 325

Contr.-rod trav.mm: 8.2

Testing:

1/min : 100 Speed C-rod trav.mm min : 19.50 Speed 1/min : 325

C-rod trav.mm : 8.10...8.30 C-rod trav.mm : 2.00

1/min : 660...720 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1075

C-rod trav.mm : 9.80...9.90 2nd speed 1/min : 500

C-rod trav.mm : 10.60...10.70 4th speed 1/min : 1025 C-rod trav.mm : 9.90...10.10

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 900

Del. abantity cm3/: 43.0...45.0

1000H.: (41.0...47.0)

BOSCH INJ. PUMP TEST SPECIFICATIONS Cam sequence : 1- 3- 2 Note inst. in remarks column Test sheet SD ang. spacing CS: 0-120-240 Tolerance + - : 0.50 (0.75) : KHD 1 G 26 : 28.11.86 Edition Superceeded Calibrating oil : ISO-4113 SD mark cyl. no. : 1 Combination no. : 0 400 463 152 BASIC SETTING 1/mi: 800 Injection pump 1st speed Pump designation : PES3A80D410/3RS1350 EP type number : 0 410 483 023 Contr.-rod trav.mm: 10.30...10.40 Governor : RSV325...1175A8C2163 Del.quantity cm3/: 4.9...5.0 Governor design. -3L 100H.: (4.8...5.2) : 0 420 232 474 Governer no. cm3/: 0.2Customer-spec. information Dispersion Customer 100H.: (0.3) : F3L912 Engine 2nd speed 1/min: 325.0 Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 1.0...1.6 1st version kW : 34.0 TEST BENCH REQUIREMENTS 100H.: (0.8...1.7) cm3/: 0.2 100H.: (0.3) Dispersion Calibrating-oil inlet temp. OC : 38...42 SLEEVE POSITION Overflow valve Control-lever position Degree: -3 1/min: 800 : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Inlet press., bar : 1.00 Calibrating nozzle-holder Governor-spring reload : 0 681 343 009 Notch setting x : 6.00 assembly Opening FULL-LOAD DELIV. AT FULL-LOAD STOP pressure, bar : 172...175 1st version 1/min: 800 Speed Del.quantity cm3/: 49.5...50.5 Test inj. tubing : 1 680 750 014 1000H: (48.0...52.0) cm3/: 2.50 1000H: (3.50) Outside diameter Dispersion x Wall thickness x Length mm : 6.00x2.00x600 HIGHEST RATED SPEED (A) Injection pump setting values 1st version Insp. values in parentheses Set constant delivery quant. Control-lever position degrees: 56...64 per values ____ Testing: START OF DELIVERY 1st c-rod trav.mm : 8.20 Speed 1/min: 1215...1225 2nd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 Speed 1/min: 1245...1275 : 1.90...2.00 Prestroke mm 3rd c-rod trav.mm : 4.00 : (1.85...2.05) Contr.-rod trav.mm: 9.00...12.00 1/min : 1255...1285 Speed H28

4th speed 1/min : 1420 C-rod trav.mm : 0.30...1.40 LOWEST RATED SPEED I Control-lever position degrees: 20...28 Setting point w/out aux. spring Speed 1/min: 325 Contr.-rod trav.mm: 5.5 Testing: Speed 1/min: 100 C-rod trav.mm min: 19.50 Speed 1/min: 325 C-rod trav.mm: 5.90...6.10 C-rod trav.mm: 2.00 1/min : 480...540 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1175 C-rod trav.mm : 9.20...9.30 2nd speed 1/min: 500 C-rod trav.mm : 10.60...10.70 4th speed 1/min : 970 C-rod trav.mm : 9.90...10.10 FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 1175
Del.quantity cm3/: 47.5...51.5
1000H: (45.5...53.5)
Speed 1/min: 500 Del.quantity cm3/: 48.5...49.5 1000H.: (46.5...51.5) Dispersion cm3/: 2.00

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 2 Note inst. in remarks column Test sheet : KHD 1 G 27 SD ang. spacing CS: 0-120-240 Tolerance + - : 0.50 (0.75) : 30.03.87 Edition Superceeded Calibrating oil : ISO-4113 SD mark cyl. no. : 1 : 0 400 463 153 Combination no. BASIC SETTING Injection pump Pump designation : PES3A80D410/3RS1350 1/mi: 1250 1st speed EP type number : 0 410 483 023 Governor Contr.-rod trav.mm: 10.10...10.20 Governor design. : RSV325...1250A2C2168 Del.quantity cm3/ : 5.7...5.8 -3L Governer no. : 0 420 232 475 190H.: (5.6...6.0) Customer-spec. information Customer cm3/:0.2Dispersion Engine : F3L912 100H.: (0.3) 1st version kW : 40.0 2nd speed 1/min: 325.0 Contr.-rod trav. m: 6.8...7.0

Del.quantity cm3/: 1.0...1.6

100H.: (0.8...1.7)

Dispersion cm3/: 0.2

100H.: (0.3) 1/min: 2500 Speed TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC : 38...42 SLEEVE POSITION Overflow valve Control-lever position : 1 417 413 000 Degree: -3 17min: 800 Speed Cont.-rod travelmm: 0.30...0.70 Inlet press., bar: 1.00 Governor-spring reload Calibrating nozzle-holder assembly : 0 681 343 009 Notch setting \tilde{x} : 3.00 FULL-LOAD DELIV. AT FULL-LOAD STOP Opening pressure, bar : 172...175 1st version Speed 1/min: 1250 Del.quantity cm3/: 57.5...58.5 1000H:: (56.0...60.0) Dispersion cm3/: 2.50 1000H:: (3.50) Test inj. tubing : 1 680 750 014 Outside diameter x Wall thickness : 6.00x2.00x600 x Length mm HIGHEST RATED SPEED (A) Injection pump setting values 1st version Insp. values in parentheses Set constant delivery quant. Control-lever position degrees: 42...50 per values Testing: 1st c-rod trav.mm : 9.10 Speed 1/min : 1290...1300 2nd c-rod trav.mm : 4.00 START OF DELIVERY Test pressure, bar: 25...27 1/min : 1315...1345 Prestroke mm : 1.90...2.00 Speed 3rd c-rod trav.mm : 4.00 : (1.85...2.05) J02

Speed 1/min: 1335...1365 4th speed 1/min: 1500

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 13...21 Setting point w/out aux. spring Speed 1/min: 325 Contr.-rod trav.mm: 5.5

Testing:

1/min : 100 Speed C-rod trav.mm min: 19.50 Speed 1/min : 325

C-rod trav.mm : 5.90...6.10 C-rod trav.mm : 2.00

1/min : 465...525 Speed

TORQUE CONTROL

Dimension a mm : 0.80

Torque-control curve - 1st version

1st speed 1/min : 1250

C-rod trav.mm : 10.10...-10.20

2nd speed 1/min: 500

C-rod trav.mm : 10.90...11.00 4th speed 1/min : 1025

C-rod trav.mm : 10.50...10.70

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 800
Del.quantity cm3/: 54.0...56.0
1000H: (52.0...58.0)
Dispersion cm3/: 2.00

Remarks:

: TK\$2.50

Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 2 BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet : KHD 1 G 29 SD ang. spacing $^{\circ}$ CS: 0-120-240 Tolerance + - $^{\circ}$: 0.50 (0.75) Edition : 09.03.87 Superceeded Calibrating oil : ISO-4113 SD mark cyl. no. : 1 : 0 400 463 154 Combination no. BASIC SETTING Injection pump Pump designation : PES3A80D410/3RS1350 1st speed 1/mi: 750 EP type number : 0 410 483 023 Contr.-rod trav.mm: 10.20...10.30 Governor Governor design. : RSV325...1175A8C2223 Del.quantity cm3/: 4.8...4.9 Governer no. : 0 420 232 482 100H.: (4.6...5.0) Customer-spec. information Customer cm3/:0.2: KHD Dispersion 100H.: (0.3) Engine : F3L912 1st version kW : 33.0 1/min: 325.0 2nd speed Contr.-rod trav. m: 6.2...6.4 Del.quantity cm3/: 1.0...1.6 Speed 1/min: 2300 TEST BENCH REQUIREMENTS 100H.: (0.8...1.7) cm3/:0.2Dispersion 100H.: (0.3) Calibrating-oil inlet temp. OC : 38...42 SLEEVE POSITION Overflow valve Control-lever position Degree: -3 1/min: 800 : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Inlet press., bar : 1.00 Calibrating nozzle-holder Governor-spring reload : 0 681 343 009 assembly Notch setting x :? FULL-LOAD DELIV. AT FULL-LOAD STOP Opening pressure, bar : 172...175 1st version Speed 1/min: 750 Del.quantity cm3/: 48.0...49.0 1000H.: (46.3...50.5) Test inj. tubing : 1 680 750 014 Dispersion cm3/ : 2.50 Outside diameter 1000H.: (3.50) x Wall thickness : 6.00x2.00x600 x Length mm HIGHEST RATED SPEED (A) Injection pump setting values 1st version Insp. values in parentheses Set constant delivery quant. Control-lever position degrees: 54...62 per values ____ Testing: START OF DELIVERY 1st c-rod trav.mm : 8.10 Speed 1/min: 1215...1225 2nd c-rod trav.mm: 4.00 Speed 1/min: 1240...1270 Test pressure, bar: 25...27 Prestroke mm : 1.90...2.00 : (1.85...2.05) 3rd c-rod trav.mm : 4.00

J04

Speed 1/min : 1245...1275 4th speed 1/min : 1420 C-rod trav.mm : 0.30...1.40 LOWEST RATED SPEED I Control-lever position degrees: 19...27 Setting point w/out aux. spring Speed 1/min: 325 Contr.-rod trav.mm: 5.8 Testing: Speed 1/min : 100 C-rod trav.mm min : 19.50 Speed 1/min : 325 C-rod trav.mm : 6.20...6.40 C-rod trav.mm : 2.00 1/min: 460...520 Speed TORQUE CONTROL Torque-control curve - 1st version 1/min : 1175 1st speed C-rod trav.mm : 9.00...9.30 2nd speed 1/min: 500 C-rod trav.mm : 10.30...10.40 4th speed 1/min : 920 C-rod trav.mm : 9.90...10.30 FUEL-DELIVERY CHARACTERISTICS 1/min : 1175 Speed Del.quantity cm3/: 46.0...51.0 1009H.: (44.0...53.0) 1/min : 500 Speed Del.quantity cm3/: 45.5...48.5 1000H.: (43.5...50.5)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing $^{\circ}$ CS: 0-90-180-270 Tolerance + - $^{\circ}$: 0.50 (0.75) Note inst. in remarks column Test sheet : SOA 3,7 A : 14.11.86 Edition BASIC SETTING Superceeded : 4.85 Calibrating oil : ISO-4113 1st speed 1/mi: 1150 Contr.-rod trav.mm: 10.60...10.70 Combination no. : 0 400 464 095 Del.quantity cm3/: 5.0...5.1 Injection pump Pump designation : PES4A80D410/3RS1183 100H.: (4.8...5.2) EP type number : 0 410 484 013 Governor : RSV325...1150A8C493cm3/:0.2Governor design. Dispersion 1L : 0 420 232 479 100H.: (0.3) Governer no. 2nd speed 1/min: 325.0 Contr.-rod trav. m: 9.3...9.5 Del.quantity cm3/: 1.6...2.2 100H.: (1.5...2.4) Dispersion cm3/: 0.2 Customer-spec. information Customer : SONACOME : F4L912 Engine 100H.: (0.3) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC SLEEVE POSITION : 38...42 1/min: 800 Speed Cont.-rod travelmm: 0.30...0.70 Overflow valve : 1 417 413 000 Governor-spring reload Notch setting x : 3.50 Inlet press., bar: 1.00 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 1st version assembly 1/min: 1150 Speed Del.quantity cm3/: 50.0...51.0 1000H: (48.5...52.5) Dispersion cm3/: 2.00 Opening pressure, bar : 172...175 1000H.: (3.50) Test inj. tubing : 1 680 750 014 HIGHEST RATED SPEED Outside diameter 1st version x Wall thickness Control-lever position degrees: 47...55 : 6.00x2.00x600 x Length mm (A) Injection pump setting values Testing: Insp. values in parentheses Set constant delivery quant. 1st c-rod trav.mm : 9.60 Speed 1/min: 1190...1200 2nd c-rod trav.mm: 4.00 per values ____ 1/min : 1220...1250 Speed START OF DELIVERY 3rd c-rod trav.mm : 4.00 Speed 1/min: 1245...1275 Test pressure, bar: 25...27 4th speed 1/min: 1350 C-rod trav.mm : 0.30...1.40 : 1.90...2.00 Prestroke mm : (1.85...2.05) Contr.-rod trav.mm: 9.00...12.00 LOWEST RATED SPEED I

Control-lever

position degrees: 13...21

Cam sequence : 1- 3- 4- 2

Setting point W/out aux. spring Speed 1/min: 325

Contr.-rod trav.mm: 8.9

Testing:

Speed 1/min: 100 C-rod trav.mm min: 19.50 Speed 1/min: 325 C-rod trav.mm: 9.30...9.50 C-rod trav.mm: 2.00 Speed 1/min: 480...540

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1150
C-rod trav.mm: 10.60...10.70
2nd speed 1/min: 450
C-rod trav.mm: 11.60...11.70
3rd speed 1/min: 900
C-rod trav.mm: 11.00...11.30

	BOSCH INJ. PUMP TE	CH INJ. PUMP TEST SPECIFICATIONS			
	Note inst. in remarks column		SD ang. spacing [©] CS: 0-90-180-270 Tolerance + - : 0.50 (0.75)		
	Test sheet Edition Superceeded Calibrating oil	: SOA 3.7 A 1 1 : 17.12.86	BASIC SETTING		
	Superceeded Calibrating oil	: 4.85 : ISO-4113	1st speed	1/mi:	1400
	Combination no.	: 0 400 464 104	Contrrod tr	av.mm:	11.0011.10
NO.	EP type number Governor	1	Del.quantity	cm3/:	5.55.6
					(5.35.7)
	_	: RSV3251400A8C742- I	Dispersion	cm3/:	0.2
	Governer no.	1			(0.3)
	Customer-spec. int Customer	formation : SONACOME /ALGER.	2nd speed Contrrod tr	av. m:	7.98.1
	Engine	: F4L912	Del.quantity Dispersion	100H.:	(0.51.4)
	TEST BENCH REQUIRE	EMENTS	v15pe: 510n	100H.:	(0.3)
	Calibrating-oil inlet temp. °C	: 3842	SLEEVE POSITI	posit	ion
	Overflow valve	: 1 417 413 000	Speed Controd tra	egree: 1/min: evelmm:	800
	Inlet press., bar	: 1.00	Governor-spri	ing ret	oad 5 75
	Calibrating nozzle assembly	-holder : 0 681 343 009		_	FULL-LOAD STOP
	Opening pressure, bar	: 172175	1st version Speed Del.quantity	cm3/:	1400 55.056.0 (53.557.5)
	Test inj. tubing	: 1 680 750 014	Dispersion of	m3/ :	2,00
	Outside diameter x Wall thickness x Length mm	: 6.00x2.00x600	HIGHEST RATED 1st version Control-lever		
		in parentheses	position de Testing: 1st c-rod tra	egrees:	10.00
	START OF DELIVERY Test pressure, bar: 2527		Speed 1/min: 14401450 2nd c-rod trav.mm: 4.00 Speed 1/min: 14851515 3rd c-rod trav.mm: 4.00		
		: (1.852.05)	Speed 1 4th speed 1	<pre>//min : //min :</pre>	15251555 1700
	Contrrod trav.mm Cam sequence	1: 9.0012.00 	C-rod trav.		0.301.40 I
- 1	1				

J08

position degrees: 18...26
Setting point w/out aux. spring
Speed 1/min: 325
Contr.-rod trav.mm: 7.5 Testing: 1/min: 100 Speed C-rod trav.mm min : 19.50 1/min : 325 Speed C-rod trav.mm : 7.90...8.10 C-rod trav.mm : 2.00 1/min : 640...700 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1400 C-rod trav.mm : 11.00...11.10 2nd speed 1/min: 500 C-rod trav.mm : 12.00...12.10 3rd speed 1/min: 885 C-rod trav.mm : 11.40...11.60 FUEL-DELIVERY CHARACTERISTICS

1/min : 800 Del.quantity cm3/: 50.0...52.0

1000H.: (48.5...53.5)

Remarks:

Speed

Control-lever

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet : KHD 5,7 E Edition : 14.11.86 Superceeded : 10.85 : ISO-4113 Calibrating oil Combination no. : 0 400 466 045 Injection pump : PES6A75D410/3RS1197 Pump designation EP type number : 0 410 476 986 Governor : RSV325...1150A8C494-Governor design. : 0 420 232 481 Governer no. Customer-spec. information Customer : SONACOME Engine : F6L912 TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC : 38...42 Overflow valve : 1 417 413 000 Inlet press., bar : 1.50 Calibrating nozzle-holder : 0 681 343 009 assembly Opening : 172...175 pressure, bar Test inj. tubing : 1 680 750 014 Outside diameter x Wall thickness : 6.00x2.00x600 x Length mm (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values START OF DELIVERY Test pressure, bar: 25...27 Prestroke mm : 1.90...2.00 : (1.85...2.05) Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4

SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0.50 (0.75) BASIC SETTING 1/mi: 1130 1st speed Contr.-rod trav.mm: 10.50...10.60 Del.quantity cm3/ : 4.3...4.4 100H.: (4.2...4.6) cm3/:0.2Dispersion 100H.: (0.3) 2nd speed 1/min: 325.0 Contr.-rod trav. m: 8.4...8.6 Del.quantity cm3/: 0.8...1.4 100H.: (0.6...1.5) cm3/:0.2Dispersion 100H.: (0.3) SLEEVE POSITION Control-lever position Degree: -3 1/min: 800 Speed Cont.-rod travelmm: 0.30...0.70 Governor-spring reload Notch setting x :? FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version 1/min: 1130 Speed Del.quantity cm3/: 43.5...44.5 1000H.: (42.0...46.0) cm3/ : 2.00Dispersion 1000H.: (3.50) HIGHEST RATED SPEED 1st version Control-lever position degrees: 47...55 Testing: 1st c-rod trav.mm : 9.50 1/min : 1170...1180 Speed 2nd c-rod trav.mm: 4.00 Speed 1/min: 1195...1225 3rd c-rod trav.mm: 4.00 Speed 1/min : 1220...1250 1/min : 1385 4th speed : 0.30...1.40 C-rod trav.mm LOWEST RATED SPEED I

Control-lever

position degrees: 14...22 Setting point w/out aux. spring

Speed 1/min: 325 Contr.-rod trav.mm: 8.0

Testing:

1/min : 100 Speed C-rod trav.mm min : 19.50 Speed 1/min : 325

C-rod trav.mm : 8.40...8.60 C-rod trav.mm : 2.00 Speed 1/min : 455...515

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1130
C-rod trav.mm: 10.50...10.60
2nd speed 1/min: 500
C-rod trav.mm: 11.50...11.60
3rd speed 1/min: 930

C-rod trav.mm : 10.90...11.10

SD ang. spacing CS: 0-90 Tolerance + - : 0.50 (0.75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column BASIC SETTING Test sheet : COU 2_0 A Edition : 09.03.87 1/mi: 1000 1st speed Superceeded Contr.-rod trav.mm: 9.40...9.50 Calibrating oil : ISO-4113 Del.quantity cm3/: 3.9...4.0 Combination no. : 0 400 472 033 100H.: (3.8...4.1) Injection pump Pump designation : PES2A70D310RS1233 cm3/:0.2EP type number : 0 410 472 009 Dispersion Governor Governor design. : RSV200...1250A1B527L Governer no. : 0 420 232 145 100H.: (0.3) 2nd speed 1/min: 200.0 Contr.-rod trav. m: 6.4...6.6 Del.quantity cm3/: 0.8...1.4 100H: (0.6...1.5) Dispersion cm3/: 0.2 Customer-spec. information Customer : COUACHE TEST BENCH REQUIREMENTS 100H.: (0.3) Calibrating-oil inlet temp. °C : 38...42 SLEEVE POSITION inlet temp. Control-lever position
Degree: -3
Speed 17min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...1.00 Inlet press., bar : 1.00 FULL-LOAD DELIV. AT FULL-LOAD STOP Calibrating nozzle-holder : 0 681 343 009 1st version assembly Speed 1/min: 1000 Del.quantity cm3/: 39.0...40.0 Opening. 1000H.: (38.0...41.0) cm3/ : 2.00 1000H.: (3.00) pressure, bar : 172...175 Dispersion Test inj. tubing : 1 680 750 014 HIGHEST RATED SPEED Outside diameter 1st version x Wall thickness Control-lever x Length mm : 6.00x2.00x600 position degrees: ? lesting: (A) Injection pump setting values 1st c-rod trav.mm : 8.40 Irsp. values in parentheses Speed 1/min: 1310...1320 2nd c-rod trav.mm: 4.00 Set constant delivery quant. per values Speed 1/min: 1330...1360 3rd c-rod trav.mm: 4.00 START OF DELIVERY 4th speed 1/min: 1480 Test pressure, bar: 25...27 C-rod trav.mm : 0.30...1.70 : 1.90...2.00 Prestroke mm : (1.85...2.05) LOWEST RATED SPEED I Contr.-rod trav.mm: 9.00...12.00 Control-lever Cam sequence : 1- 2 position degrees: ? Setting point w/out aux. spring Speed 1/min : 200

Contr.-rod trav.mm: 6.0

Testing:

Speed 1/min: 100 C-rod trav.mm min: 19.50 Speed 1/min: 200 C-rod trav.mm : 6.40...6.60

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1000
C-rod trav.mm: 9.40...9.50
2nd speed 1/min: 500
C-rod trav.mm: 9.40...9.60

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column

Test sheet : STE 3,1 B : 12.09.86 Edition Superceeded : 10.85 Calibrating oil : ISO-4113

: 0 400 474 152 Combination no.

Injection pump

Pump designation : PES4A75D410RS1215 EP type number : 0 410 474 969

Governor

Governor design. : RSV250...900A7B719DL

Governer no. : 0 420 234 327

Customer-spec. information Customer : STEYR

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. C

: 38...42

Overflow valve

: 1 417 413 000

Inlet press., bar : 1.00

Calibrating nozzle-holder

: 0 681 343 009 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter x Wall thickness

x Length mm : 6.00x2.00x600

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant.

per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 2.45...2.55 Prestroke mm : (2.40...2.60)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 3- 4- 2

SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0.50 (0.75)

BASIC SETTING

1/mi: 900 1st speed

Contr.-rod trav.mm: 11.50...11.60

Del.guantity cm3/: 5.8...5.9

100H.: (5.7...6.1)

cm3/:0.2Dispersion

100H.: (0.4)

1/min: 250.0 2nd speed

Contr.-rod trav. m: 5.4...5.6

Del.quantity cm3/: 1.0...1.6

100H.: (0.8...1.7)

Dispersion cm3/: 0.2

100H.: (0.3)

SLEEVE POSITION

Control-lever position

Degree: -3

17min: 800 Speed

Cont.-rod travelmm: 0.30...1.00

Governor-spring reload Notch setting x : ?

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

1/min: 900 Speed

Del.quantity cm3/: 58.5...59.5 1000H.: (57.0...61.0) Dispersion cm3/: 2.50 1000H.: (4.00)

HIGHEST RATED SPEED

1st version

Control-lever

position degrees: 56...64

Testing:

1st c-rod trav.mm : 10.50 Speed 1/min : 930...940

2nd c-rod trav.mm : 4.00

1/min : 965...995 Speed 4th speed 1/min: 1100

: 0.30...1.70 C-rod trav.mm

LOWEST RATED SPEED I

Control-lever

position degrees: 21...29 Setting point w/out aux. spring

1/min : 250 Speed

Contr.-rod trav.mm: 5.5

Testing:

Speed 1/min: 100 C-rod trav.mm min: 19.50 1/min : 250 Speed

C-rod trav.mm : 5.90...6.10 C-rod trav.mm : 2.00

Speed 1/min : 405...465

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 900

C-rod trav.mm : 11.50...11.60 2nd speed 1/min : 500

C-rod trav.mm : 11.70...11.90 3rd speed 1/min : 750

C-rod trav.mm : 11.70...11.90

Contr.-rod trav.mm: 9.00...12.00 BOSCH INJ. PUMP TEST SPECIFICATIONS Cam sequence : 1- 4- 9- 8- 5- 2- 11- 10- 3- 6- 7- 12 Note inst. in remarks column Test sheet : KHD 19,0 N2 : 12.09.86 Edition Superceeded SD ang. spacing CS: 0-15-60-75-120-135-: 10.85 Calibrating oil : ISO-4113 180-195-240-255-300-315 Tolerance + - 0 : 0.50 (0.75) Combination no. : 0 400 640 107 SD mark cyl. no. : 1 Injection pump Pump designation : PE12A95D610LS2590 EP type number : 0 410 690 995 BASIC SETTING Governor Governor design. : RQV300...1150AB1047D 1/mi: 1150 1st speed Contr.-rod trav.mm: 9.30...9.40 Governer no. : 0 420 214 242 Del.quantity cm3/: 6.9...7.1 Customer-spec. information Customer 100H.: (6.7...7.3) : F12L413FW Engine Dispersion cm3/:0.31st version kW : 230.0 Speed 1/min: 2300 100H.: (0.6) 2nd speed 1/min: 300.0 Contr.-rod trav. m: 7.2...7.4 Del.quantity cm3/: 1.4...2.0 100H.: (1.1...2.2) Dispersion cm3/: 0.7 100H.: (-) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C : 38...42 Overflow valve : 1 417 413 000 (B) Setting of injection pump with externally-mounted governor Inlet press., bar: 1.00 SLEEVE TRAVELS Calibrating nozzle-holder 1st speed 1/min: 300 ; 0 681 343 009 assembly Sleeve travel mm: 1.20...1.30 1/min: 400 2nd speed Opening Sleeve travel mm: 2.20...2.60 pressure, bar : 172...175 1/min: 600 3rd speed Sleeve travel mm: 3.00...3.50 th speed 1/min: 1195
Sleeve travel mm: 8.40...8.50
th speed 1/min: 1245
Sleeve travel mm: 9.10...9.30 Test inj. tubing : 1 680 750 014 4th speed Outside diameter 5th speed x Wall thickness : 6.00X2.00X600 x Length mm SLEEVE POSITION Control-lever position (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Degree: -1 Speed 17min: 1200 Cont.-rod travelmm: 15.20...17.80 per values ____ FULL-LOAD DELIV. AT FULL-LOAD STOP START OF DELIVERY Test pressure, bar: 25...27 1st version 1/min: 1150 Prestroke mm : 1.50...1.60 Speed : (1.45...1.65) J16

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Del.quantity cm3/: 69.0...71.0
1000H.: (67.0...73.0)
Dispersion cm3/: 3.50
             1000H.: (6.00)
HIGHEST RATED SPEED
1st version
Control-lever
 position degrees: 61...69
Testing:
1st c-rod trav.mm : 8.30
          1/min : 1190...1200
  Speed
2nd c-rod trav.mm : 4.00
           1/min : 1230...1260
  Speed
4th speed 1/min: 1350
  C-rod trav.mm : 0...1.0
LOWEST RATED SPEED I
Control-lever
 position degrees: 8...16
Testing:
             1/min : 100
Speed
C-rod trav.mm min : 7.80
Speed
            1/min : 300
C-rod trav.mm
                : 6.20...6.40
CONSTANT REGULATION
Speed
             1/min : 320...430
TORQUE CONTROL
Dimension a mm : 1.00
Torque-control curve - 1st version
1st speed 1/min : 1150
  C-rod trav.mm : 9.30...9.40
2nd speed 1/min : 500
C-rod trav.mm : 10.30...10.40
3rd speed 1/min : 935
  C-rod trav.mm : 10.00...10.20
4th speed 1/min: 1045
  C-rod trav.mm : 9.50...9.70
SWITCH-OVER POINT
             1/min : 220 (240)
Speed
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 500
Del.quantity cm3/: 77.5...80.5
             1000H.: (75.0...83.0)
             1/min : 800
Speed
Del.quantity cm3/: 98.5...101.5
1000H.: (96.0...104.0)
```

Note inst. in remarks column

: KHD 19,0 N3 Test sheet Edition : 12.09.86

Superceeded

: ISO-4113 Calibrating oil

Combination no. : 0 400 640 112

Injection pump

Pump designation : PE12A95D610LS2590

: 0 410 690 995 EP type number

Governor

Governor design.
Governer no. : RQV300...1150AB1086L

: 0 420 212 113

Customer-spec. information

Customer : KHD

: F12L413F Engine

1st version kW : 235.0

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C

: 38...42

Overflow valve

: 1 417 413 000

Inlet press., bar: 1.00

Calibrating nozzle-holder

: 0 681 343 009 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 014

Outside diameter

x Wall thickness

: 6.00x2.00x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses

Set constant delivery quant.

per values ____

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm *i* 1.50...1.60

: (1.45...1.65)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 4- 9- 8- 5- 2-

SD ang. spacing CS: 0-15-60-75-120-135-180-195-240-255-300-

315

Tolerance + - 0 : 0.50 (0.75)

SD mark cyl. no. : 1

BASIC SETTING

1/mi: 1150 1st speed

Contr.-rod trav.mm: 9.50...9.60

Del.quantity cm3/ : 7.9...8.1

100H.: (7.7...8.3)

Dispersion cm3/:0.3

100H.: (0.6)

1/min: 300.0 2nd speed Contr.-rod trav. m: 6.4...6.6

Del.quantity cm3/: 1.0...1.6

100H.: (0.7...1.8)

Dispersion cm3/: 0.3

100H.: (0.5)

(B) Setting of injection pump with externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 250 Sleeve travel mm: 0.30...0.50

2nd speed 1/min: 600

Sleeve travel mm: 2.70...3.00 d speed 1/min: 1000

3rd speed Sleeve travel mm: 5.90...6.10

4th speed 1/min: 1190

Sleeve travel mm: 8.30...8.50

SLEEVE POSITION Control-lever position

Degree: -1 1/min: 1200 Speed

Cont.-rod travelmm: 15.20...17.80

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

Speed 1/min: 1150

Del.quantity cm3/: 79.0...81.0 1000H:: (77.0...83.0) Dispersion cm3/: 3.50

1000H.: (6.00)

HIGHEST RATED SPEED 1st version Control-lever position degrees: 56...64 Testing: 1st c-rod trav.mm : 8.50 Speed 1/min: 1190...1200 2nd c-rod trav.mm: 4.00 1/min : 1230...1260 1/min : 1350 Speed 4th speed C-rod trav.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 18...26 Setting point w/out aux. spring 1/min : 300 Speed Contr.-rod trav.mm: 6.5 Testing: Speed 1/min: 100 C-rod trav.mm min: 8.00 Speed 1/min: 300 C-rod trav.mm : 6.40...6.60 CONSTANT REGULATION Speed 1/min: 420...540 TORQUE CONTROL Dimension a mm : 0.90 Torque-control curve - 1st version 1st speed 1/min : 1150 C-rod trav.mm : 9.50...9.60 2nd speed 1/min: 500 C-rod trav.mm : 10.40...10.50 3rd speed 1/min : 990 C-rod trav.mm : 10.10...10.30 4th speed 1/min : 1060 C-rod trav.mm : 9.60...9.90 SWITCH-OVER POINT 1/min : 220 (240) Speed FUEL-DELIVERY CHARACTERISTICS 1/min : 800 Speed Del.quantity cm3/: 84.5...87.5 1000H.: (82.0...90.0)

```
: 1- 8- 7- 2- 6- 5-
4- 3
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                     Cam sequence
Note inst. in remarks column
Test sheet
                   : KHD 12,7 P4
                                                     SD ang. spacing CS: 0-45-90-135-180-225-
Edition
                   : 30.03.87
                                                                           270-315
Superceeded
                                                     Tolerance + - 0
Calibrating oil
                   : ISO-4113
                                                                         : 0.50 (0.75)
Combination no.
                   : 0 400 648 145
                                                     SD mark cyl. no. : 1
                                                     BASIC SETTING
Injection pump
Pump designation
                   : PE8A95D410LS2608
EP type number
                   : 0 410 698 988
                                                                    1/mi: 1100
                                                     1st speed
Governor
Governor design. : RQ300/1100AB1230L
                                                     Contr.-rod trav.mm: 10.10...10.20
Governer no.
                   : 0 420 200 108
                                                     Del.quantity cm3/ : 9.0...9.2
Customer-spec. information
                                                                    100H.: (8.8...9.4)
Customer
                   : KHD
                                                                   cm3/:0.3
Engine
                   : F8L413F
                                                     Dispersion
1st version kW : 162.0
                                                                    100H.: (0.6)
Speed
              1/min: 2200
                                                                   1/min: 300.0
                                                     2nd speed
                                                     Contr.-rod trav. m: 6.4...6.6

Del.quantity cm3/: 1.0...1.6

100H.: (0.7...1.8)

Dispersion cm3/: 0.5
100H.: (0.7)
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                   : 38...42
Overflow valve
                    : 1 417 413 000
                                                     SLEEVE POSITION
                                                     Control-lever position
                                                                  Degree: -1
Inlet press., bar : 1.00
                                                     Speed 1/min: 550
Cont.-rod travelmm: 15.60...16.40
Calibrating nozzle-holder
                 : 0 681 343 009
 assembly
                                                     Governor-spring reload
                                                     Notch setting x :?
Opening
pressure, bar : 172...175
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Test inj. tubing : 1 680 750 014
                                                     1st version
                                                                   1/min: 1100
                                                     Speed
                                                     Del.quantity cm3/: 90.0...92.0
1000H:: (88.0...94.0)
Dispersion cm3/: 3.50
Outside diameter
x Wall thickness
                   : 6.00x2.00x600
x Length mm
                                                                  1000H.: (6.00)
(A) Injection pump setting values
    Insp. values in parentheses
                                                     HIGHEST RATED SPEED
    Set constant delivery quant.
                                                     1st version
    per values ____
                                                     Control-lever
                                                      position degrees: ?
START OF DELIVERY
                                                     Testing:
Test pressure, bar: 25...27
                                                     1st c-rod trav.mm : 9.10
                   : 2.00...2.10
                                                       Speed 1/min: 1145...1160
Prestroke mm
                   : (1.95...2.15)
                                                     2nd c-rod trav.mm: 4.00
Contr.-rod trav.mm: 9.00...12.00
                                                                  1/min : 1205...1235
                                                       Speed
J20
```

position degrees: ? Setting point w/out aux. spring Speed 1/min : 300 Contr.-rod trav.mm: 6.5 Testing: 1/min : 100 Speed C-rod trav.mm min : 8.00 1/min : 300 Speed C-rod trav.mm : 6.40...6.60 C-rod trav.mm : 2.00 Speed 1/min : 355...395 TORQUE CONTROL Dimension a mm : 0.35 Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 10.10...10.20 2nd speed 1/min : 550 C-rod trav.mm : 10.80...10.90 3rd speed 1/min : 810 C-rod trav.mm : 10.60...10.80 4th speed 1/min: 980 C-rod trav.mm : 10.30...10.50 FUEL-DELIVERY CHARACTERISTICS Speed 1/min : 700 Del.quantity cm3/: 92.5...95.5 1000H:: (90.0...98.0)

LOWEST RATED SPEED I

Control-lever

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-10- 9- 4- 3- 6- 5- 8- 7- 2 Note inst. in remarks column Test sheet Edition Superceeded : KHD 15,8 N1 : 09.03.87 : 10.85 SD ang. spacing CS: 0-27-72-99-144-171-Calibrating oil : ISO-4113 216-243-288-315 Tolerance + - 0 : 0.50 (0.75) Combination no. : 0 400 649 219 SD mark cyl. no. : 1 Injection pump Pump designation : PE10A95D610/4LS2589 BASIC SETTING EP type number : 0 410 699 994 1st speed Governor 1/mi: 1150 Governor design.: RQV300...1150AB1047D Contr.-rod trav.mm: 8.30...8.40 Governer no. : 0 420 214 242 Del.quantity cm3/: 6.9...7.1 Customer-spec. information 100H.: (6.7...7.3) Customer : KHD Engine : F10L 13 Dispersion cm3/:0.31st version kW : 192.0 100H.: (0.6) 1/min: 2300 Speed 2nd speed 1/min: 300.0 Contr.-rod trav. m: 6.2...6.4 TEST BENCH REQUIREMENTS Del.quantity cm3/: 1.4...2.0 100H.: (1.1...2.2) cm3/: 0.3 100H.: (0.5) Calibrating-oil inlet temp. OC : 38...42 Dispersion Overflow valve : 1 417 413 000 (B) Setting of injection pump with externally-mounted governor Inlet press., bar : 1.00 SLEEVE TRAVELS Calibrating nozzle-holder 1st speed 1/min: 300 : 0 681 343 009 assembly Sleeve travel mm: 1.20...1.30 2nd speed 1/min: 400
Sleeve travel mm: 2.30...2.70
3rd speed 1/min: 600
Sleeve travel mm: 3.00...3.50 Opening pressure, bar : 172...175 4th speed 1/min: 1195 Test inj. tubing : 1 680 750 014 Sleeve travel mm: 8.40...8.50 5th speed 1/min: 1235 Outside diameter Sleeve travel mm: 8.90...9.10 x Wall thickness : 6.00X2.00X600 SLEEVE POSITION x Length mm Control-lever position Degree: -1 1/min: 1190 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Cont.-red travelmm: 15.20...17.80 per values _____ FULL-LOAD BELIV. AT FULL-LOAD STOP START OF DELIVERY Test pressure, bar: 25...27 1st version Speed 1/min: 1150 Del.quantity cm3/: 69.0...71.0 1000H.: (67.0...73.0) Prestroke mm : 1.50...1.60 : (1.45...1.65)

J22

```
Dispersion cm3/ : 3.50
             1000H.: (6.00)
HIGHEST RATED SPEED
1st version
Control-lever
 position degrees: 62...70
Testing:
1st c-rod trav.mm : 7.30
            1/min : 1190...1200
  Speed
2nd c-rod trav.mm : 4.00
            1/min : 1220...1250
1/min : 1350
  Speed
4th speed
  C-rod trav.mm : 0.00...1.00
LOWEST RATED SPEED I
Control-lever
 position degrees: 11...19
Testing:
Speed 1/min: 100
C-rod trav.mm min: 7.80
Speed 1/min: 300
C-rod trav.mm
                 : 6.20...6.40
CONSTANT REGULATION
            1/min : 320...430
Speed
TORQUE CONTROL
Dimension a mm : 1.00
Torque-control curve - 1st version
1st speed 1/min : 1150
  C-rod trav.mm : 8.30...8.40
2nd speed 1/min: 500
  C-rod trav.mm : 9.30...9.40
3rd speed 1/min: 935
  C-rod trav.mm : 9.00...9.20
4th speed 1/min: 1045
  C-rod trav.mm : 8.50...8.70
SWITCH-OVER POINT
            1/min : 220 (240)
Speed
FUEL-DELIVERY CHARACTERISTICS
Speed 1/min: 800
Del.quantity cm3/: 75.5...78.5
1000H.: (73.0...81.0)
             1/min : 800
Speed
Del.quantity cm3/: 98.5...101.5
             1000H.: (96.0...104°0)
```

SD ang. spacing CS: 0-45-72-117-144-189-BOSCH INJ. PUMP TEST SPECIFICATIONS 216-261-288-333 Tolerance $+ - \circ$: 0.50 (0.75) Note inst. in remarks column Test sheet Edition Superceeded : MAN 16,0C10 SD mark cyi. no. : 10 : 12.09.86 : 4.85 BASIC SETTING Calibrating oil : ISO-4113 1/mi: 1250 1st speed Combination no. : 0 400 649 235 Contr.-rod trav.mm: 11.30...11.40 Injection pump Pump designation : PE10A95D520/5L82501 Del.quantity cm3/ : 12.3...12.5 EP type number : 0 410 699 997 100H.: (12.1...12.7) Governor Governor design. : RQV250...1250AB1180R cm3/:0.3Governer no. : 0 420 213 095 Dispersion Customer-spec. information 100H.: (0.6) Customer : MAN 2nd speed 1/min: 250.0 Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 1.5...2.1 100H.: (1.2...2.3) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC cm3/:0.3: 38...42 Dispersion 100H.: (0.5) Overflow valve (B) Setting of injection pump with externally-mounted governor : 1 417 413 000 Inlet press., bar : 1.00 SLEEVE TRAVELS 1st speed 1/min: 200 Calibrating nozzle-holder Sleeve travel mm: 0.70...0.90 : 0 681 343 009 assembly 2nd speed 1/min: 425 Sleeve travel mm: 2.80...3.10
3rd speed 1/min: 1000
Sleeve travel mm: 5.60...5.80
4th speed 1/min: 1290 Opening pressure, bar : 172...175 Sleeve travel mm: 8.10...8.20 Test inj. tubing : 1 680 750 003 Outside diameter SLEEVE POSITION x Wall thickness Control-lever position Degree: -1 1/min: 1325 x Length mm : 6.00x2.00x600 Cont.-rod travelmm: 15.20...17.80 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. FULL-LOAD DELIV. AT FULL-LOAD STOP per values 1st version Speed 1/min: 1250 Charge press. hPa: 700 START OF DELIVERY Test pressure, bar: 25...27 Del.quantity cm3/: 123.0...125.0 1000H:: (121.0...127.0) Dispersion cm3/: 3.50 Prestroke mm : 1.70...1.80 : (1.65...1.85) 1000H.: (6.00) Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 10- 9- 4- 1- Cam sequence : - 6- 3- 5-HIGHEST RATED SPEED 1st version Control-lever position degrees: 42...50

Testing: 1st c-rod trav.mm : 10.30 Speed 1/min: 1290...1300 2nd c-rod trav.mm : 4.50 1/min : 1355...1385 Speed 4th speed 1/min: 1500 C-rod trav.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 10...18 Testing: 1/min : 100 Speed C-rod trav.mm min : 7.50 Speed 1/min : 250 : 5.90...6.10 C-rod trav.mm C-rod trav.mm : 2.00 1/min : 320...380 1/min : 500 Speed Speed C-rod trav.mm max: 1.00 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1250 C-rod trav.mm : 11.30...11.40 2nd speed 1/min : 500 C-rod trav.mm : 11.30...11.50 compensator (LDA,ADA,ALDA) 1st version Setting 1/min : 500 hPa : 700 Speed Pressure Contr.-rod trav.mm: 11.30...11.40 Measurement Speed 1/min : 500 1st pressure hPa : -C-rod trav.mm : 9.20...9.30 2nd pressure hPa : 387 C-rod trav.mm : 10.60...10.90 3rd pressure hPa : 280 C-rod trav.mm : 9.50...9.70 SWITCH-OVER POINT 1/min : 170 (190) Speed FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa: 700 1/min : 750 Speed Del.quantity cm3/: 119.5...122.5 1000H:: (117.5...124.5) Charge press. hPa: -

J25

Speed 1/min: 500 Del.quantity cm3/: 76.5...79.5 1000H.: (74.5...81.5)

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : DAF 8,3 I 1 Edition : 09.03.87 Superceeded : 1.85 Calibrating oil : ISO-4113

Combination no. : 0 400 676 151

Injection pump

Pump designation : PE6A90D410RS2524 EP type number : 0 410 696 179

Governor

Governor design. : RSV250...1200A5B2012

: 0 420 234 379 Governer no.

Customer-spec. information Customer

: DH825 Engine Speed 1/min: 2400

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C

: 38...42

Overflow valve

: 1 417 413 000

Inlet press., bar: 1.50

Calibrating nozzle-holder

: 0 681 343 909 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter x Wall thickness

: 6.00x1.50x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 2.30...2.40 Prestroke mm

: (2.25...2.35) Contr.-rod trav.mm: 7.50...10.50 Cam sequence : 1-5- 3- 6- 2-

SD ang. spacing 0 CS: 0-60-120-180-240-300 Tolerance + - 0 : 0.50 (0.75) SD mark cyl. no. : 1 START OF DELIVERY DIFFERENCE betw.c-rod trav.mm: 8.50...9.50 Difference CS : 4.50...5.50 BASIC SETTING 1st speed 1/mi: 1000 Contr.-rod trav.mm: 9.40...9.50 Del.quantity cm3/ : 7.1...7.2 100H.: (6.9...7.4) Dispersion cm3/:0.3100H.: (8.4) 1/min: 250.0 2nd speed Contr.-rod trav. m: 6.5...6.7 Del.quantity cm3/: 0.9...1.5 100H.: (0.7...1.7) cm3/:0.2Dispersion 100H.: (0.4) SLEEVE POSITION Control-lever position Degree: -3 Speed 17min: 800 Cont.-rod travelmm: 0.30...1.00 Governor-spring reload Notch setting x :? FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version 1/min: 1000 Speed Del.quantity cm3/: 71.0...72.0 1000H:: (69.0...74.0) Dispersion cm3/: 3.00 1000H.: (4.50) HIGHEST RATED SPEED 1st version Control-lever position degrees: 45...53 Testing:

1st c-rod trav.mm : 8.40

1/min : 1240...1250

Speed

J27

2nd c-rod trav.mm : 4.00 Speed 1/min: 1260...1290 4th speed 1/min: 1480

C-rod trav.mm : 0.30...1.70

LOWEST RATED SPEED I Control-lever

position degrees: 12...20 Setting point w/out aux. spring

1/min : 250 Contr.-rod trav.mm: 5.5 Speed 1/min: 250

C-rod trav.mm : 5.90...6.10 C-rod trav.mm : 2.00

1/min : 580...640 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1/min : 1000 1st speed

C-rod trav.mm : 9.40...9.50

2nd speed 1/min: 400

C-rod trav.mm : 9.40...9.60 3rd speed 1/min : 300

C-rod trav.mm : 9.70...10.20

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0.50 (0.75) Note inst. in remarks column Test sheet : DAF 6,2 K 1 : 09.03.87 Edition SD mark cyl. no. : 1 Superceeded : ISO-4113 START OF DELIVERY DIFFERENCE Calibrating oil betw.c-rod trav.mm: 8.50...9.50 Difference ° CS : 3.00...4.00 Combination no. : 0 400 676 154 Injection pump Pump designation : PE6A85D32ORS2546 BASIC SETTING EP type number : 0 410 686 943 1/mi: 1000 Governor 1st speed Governor design. : RSV250...1300A1B2025 Contr.-rod trav.mm: 10.40...10.50 Governer no. : 0 420 233 129 Del.quantity cm3/ : 5.6...5.7 Customer-spec. information 100H.: (5.4...5.9) Customer : DAF : DF615 cm3/:0.3Engine Dispersion TEST BENCH REQUIREMENTS 100H.: (0.4) Calibrating-oil inlet temp. °C 1/min: 250.0 2nd speed Contr.-rod trav. m: 8.1...8.3

Del.quantity cm3/: 1.4...1.9

100H.: (1.2...2.1)

Dispersion cm3/: 0.2

100H.: (0.4) : 38...42 Overflow valve : 1 417 413 000 Inlet press., bar: 1.50 SLEEVE POSITION Control-lever position Calibrating nozzle-holder : 0 681 343 009 assembly Degree: -3 17min: 800 Cont.-rcd travelmm: 0.30...1.00 Opening pressure, bar : 172...175 Governor-spring reload Notch setting x : 4.00 Test inj. tubing : 1 680 750 015 FULL-LOAD DELIV. AT FULL-LOAD STOP Outside diameter x Wall thickness 1st version 1/min: 1000 : 6.00x1.50x600 x Length mm Speed Del.quantity cm3/: 56.0...57.0 1000H:: (54.0...59.0) Dispersion cm3/: 3.00 1600H:: (4.50) (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values HIGHEST RATED SPEED START OF DELIVERY 1st version Test pressure, bar: 25...27 Control-lever position degrees: 63...71 : 2.15...2.25 Prestroke mm : (2.10...2.30) Contr.-rod trav.mm: 7.50...10.50 Testing: 1st c-rod trav.mm : 9.40 Speed 1/min : 1340...1350 Cam sequence : 1-5-3-6-2-4 2nd c-rod trav.mm : 4.00 K01

\$peed 1/min : 1355...1385
3rd c-rod trav.mm : 4.00 Speed 1/min: 1380...1410 4th speed 1/min: 1540 C-rod trav.mm : 0.30...1.70 LOWEST RATED SPEED I Control-lever position degrees: 17...25 Setting point w/out aux. spring Speed 1/min: 250 Contr.-rod trav.mm: 5.5 Testing: 1/min: 100 Speed C-rod trav.mm min : 19.50 Speed 1/min : 250 C-rod trav.mm : 5.90...6.10 C-rod trav.mm : 2.00 1/min : 470...530 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1000 C-rod trav.mm : 10.40...10.50 2nd speed 1/min: 400 C-rod trav.mm : 10.40...10.60 3rd speed 1/min : 300 C-rod trav.mm : 10.70...11.20

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Note inst. in remarks column Test sheet Edition Superceeded : DAF 8.3 N 2 : 09.03.87 SD mark cyl. no. : 1 : 10.84 Calibrating oil : ISO-4113 START OF DELIVERY DIFFERENCE betw.c-rod trav.mm: 8.50...9.50 Difference CS : 3.00...4.00 Combination no. : 0 400 676 172 Injection pump Pump designation : PE6A95D41ORS2575Y BASIC SETTING EP type number : 0 410 696 981 Governor 1/mi: 750 1st speed Governor design. : RSV250...750A7B2124L Contr.-rod trav.mm: 13.20...13.30 Governer no. : 0 420 232 257 Customer-spec. information Del.quantity cm3/: 11.0...11.2 Customer 100H.: (16.8...11.4) Engine : DHTD 825 1/min: 1500 cm3/:0.4Speed Dispersion TEST BENCH REQUIREMENTS 100H.: (0.6) Calibrating-oil inlet temp. OC 1/min: 250.0 2nd speed Contr.-rod trav. m: 6.0...6.2 : 38...42 Del.quantity cm3/: 0.7...1.3 100H.: (-) Overflow valve cm3/: 0.2 100H.: (-) : 1 417 413 000 Dispersion Inlet press., bar : 1.50 SLEEVE POSITION Calibrating nozzle-holder Control-lever position Degree: -3 1/min: 800 assembly : 0 681 343 009 Cont.-rod travelmm: 0.30...1.00 Opening pressure, bar : 172...175 Governor-spring reload Notch setting x :? Test inj. tubing : 1 680 750 015 FULL-LOAD DELIV. AT FULL-LOAD STOP Outside diameter x Wall thickness 1st version : 6.00x1.50x600 1/min: 750 x Length mm Speed Del.quantity cm3/: 110.5...112.5 1000H.: (108.5...114.5) Dispersion cm3/: 4.00 1000H.: (6.00) (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____ HIGHEST RATED SPEED START OF DELIVERY 1st version Test pressure, bar: 25...27 Control-lever position degrees: 36...44 : 2.00...2.10 Prestroke mm : (1.95...2.15) Testing: Contr.-rod trav.mm: 7.50...10.50 Cam sequence : 1-5- 3- 6- 2- 4 1st c-rod trav.mm : 12.20 Speed 1/min : 770...780 2nd c-rod trav.mm : 4.00 **K03**

\$peed 1/min: 785...805 4th speed 1/min: 955

C-rod trav.mm : 0.39...1.70

LOWEST RATED SPEED I

Control-lever

control-lever
position degrees: 12...20
Setting point w/out aux. spring
Speed 1/min: 250
Contr.-rod trav.mm: 6.1
Speed 1/min: 250
C-rod trav.mm: 6.00...6.20
C-rod trav.mm: 2.00
Speed 1/min: 260...320

SET IDLE AUXILIARY SPRING Contr.-rod trav.mm: 2.00

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Note inst. in remarks column Test sheet Edition Superceeded : DAF 6,2 N 3 : 09.03.87 SD mark cyl. no. : 1 : 10.85 START OF DELIVERY DIFFERENCE Calibrating oil : ISO-4113 betw.c-rod trav.mm: 8.50...9.50 Difference CS : 2.50...3.50 Combination no. : 0 400 676 179 BASIC SETTING Injection pump Pump designation : PE6A90D320RS2577 EP type number 1/mi: 700 : 0 410 696 181 1st speed Governor Contr.-rod trav.mm: 11.00...11.10 Governor design. : RSV250...750A7C2202R Governer no. : 0 420 233 202 Del.quantity cm3/ : 7.4...7.6 Customer-spec. information 100H.: (7.2...7.8) Customer : DAF cm3/:0.4Engine : DT 615 Dispersion 100H.; (0.5) TEST BENCH REQUIREMENTS 2nd speed 1/min: 250.0 Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 0.8...1.4 Calibrating-oil inlet temp. °C : 38...42 Overflow valve 100H.: (0.6...1.6) : 1 417 413 000 cm3/:0.2Dispersion 100H.: (0.4) Inlet press., bar : 1.50 SLEEVE POSITION Calibrating nozzle-holder Control-lever position : 0 681 343 009 Degree: -3 assembly 17min: 800 Speed Cont.-rod travelmm: 0.30...0.70 Opening pressure, bar : 172...175 Governor-spring reload Notch setting x : 5.00Test inj. tubing : 1 680 750 015 FULL-LOAD DELIV. AT FULL-LOAD STOP Outside diameter x Wall thickness 1st version x Length mm : 6.00x1.50x600 1/min: 700 Speed Del.quantity cm3/ : 74.0...76.0 1000H.: (72.0...78.0) cm3/ : 4.00 1000H.: (5.50) (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Dispersion per values HIGHEST RATED SPEED START OF DELIVERY 1st version Test pressure, bar: 25...27 Control-lever position degrees: 40...48 Prestroke mm : 2.20...2.30 : (2.15...2.35) Testing: 1st c-rod trav.mm : 10.00 Speed 1/min : 750...755 2nd c-rod trav.mm : 4.00 Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5- 3- 6- 2- 4 1/min : 780...795 Speed

4th speed 1/min : 950 C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 17...25
Setting point w/out aux. spring
Speed 1/min: 250

Contr.-rod trav.mm: 6.0

Testing:

1/min : 100 Speed C-rod trav.mm min: 19.50

Speed 1/min: 250

C-rod trav.mm : 5.90...6.10

C-rod trav.mm : 2.00

Speed 1/min: 280...340

SET IDLE AUXILIARY SPRING Contr.-rod trav.mm: 2.00

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Note inst. in remarks column Test sheet : DAF 8.3 K 6 : 07.11.86 SD mark cyl. no. : 1 Superceeded : 10.85 Calibrating oil : ISO-4113 START OF DELIVERY DIFFERENCE betw.c-rod trav.mm: 8.50...9.50 Combination no. : 0 400 676 184 & c-rod tray max. : 21.0 Difference CS : 3.00...4.00 Injection pump Pump designation : PE6A95D41ORS2525 : 0 410 696 987 BASIC SETTING EP type number Governor Governor design. : RSV250...1200A5C2199 1st speed 1/mi: 1000 -1L Governer no. : 0 420 232 450 Contr.-rod trav.mm: 12.60...12.70 Del.quantity cm3/: 10.9...11.0 Customer-spec. information Customer : DAF 100H.: (10.7...11.2) : DHTD 825 Engine Dispersion cm3/:0.3TEST BENCH REQUIREMENTS 100H.: (0.6) Calibrating-oil inlet temp. OC : 38...42 1/min: 250.0 2nd speed Contr.-rod trav. m: 6.0...6.2 Del.quantity cm3/: 0.7...1.1 100H:: (0.4...1.3) Dispersion cm3/: 0.3 100H:: (0.5) Overflow valve : 1 417 413 000 Inlet press., bar : 1.50 SLEEVE POSITION Calibrating nozzle-holder : 0 681 343 009 Control-lever position assembly Degree: -3 Speed 17min: 800 Opening. pressure, bar : 172...175 Cont.-rod travelmm: 0.30...0.70 Governor-spring reload Test inj. tubing : 1 680 750 015 Notch setting x : 4.25 FULL-LOAD DELIV. AT FULL-LOAD STOP Outside diameter x Wall thickness x Length mm : 6.00x1.50x600 1st version Speed 1/min: 1000 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____ START OF DELIVERY HIGHEST RATED SPEED Test pressure, bar: 25...27 1st version : 2.00...2.10 Control-lever Prestroke mm : (1.95...2.15)
Contr.-rod trav.mm: 7.50...10.50
Cam sequence : 1-5-3-6-2-4 position degrees: 51...59 Testing: 1st c-rod trav.mm : 11.60

```
1/min: 1230...1240
  Speed
2nd c-rod trav.mm : 4.00
 Speed
           1/min : 1290...1320
3rd c-rod trav.mm : 4.00
          1/min: 1310...1340
 Speed
          1/min : 1490
4th speed
  C-rod trav.mm : 0.30...1.40
LOWEST RATED SPEED I
Control-lever
position degrees: 17...25
Setting point w/out aux. spring
Speed
           1/min : 250
Contr.-rod trav.mm: 5.6
           1/min : 250
Speed
              : 6.00...6.20
C-rod trav.mm
C-rod trav.mm
                : 2.00
          1/min : 445...505
Speed
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1000
 C-rod trav.mm : 13.40...13.50
2nd speed 1/min: 400
 C-rod trav.mm : 13.60...13.70
3rd speed 1/min: 300
 C-rod trav.mm : 13.80...14.30
compensator (LDA, ADA, ALDA)
1st version
Setting
           1/min : 1000
Speed
Pressure
           hPa : 700
Contr.-rod trav.mm: 12.60...12.70
Measurement
           1/min : 1000
Speed
1st pressure hPa : -
 C-rod trav.mm : 11.50...11.60
2nd pressure hPa : 300
 C-rod trav.mm : 12.30...12.40
3rd pressure hPa : 260
 C-rod trav.mm : 11.70...11.90
FUEL-DELIVERY CHARACTERISTICS
Charge press. hPa : -
           1/min : 600
Del.quantity cm3/: 85.5...86.5
           1000H.: (83.5...88.5)
```

Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 4- 2 BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet : MB 4,0 A SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0.50 (0.75) : 09.03.87 Edition Superceeded : 12.84 Calibrating oil : ISO-4113 BASIC SETTING : 0 400 844 083 Combination no. 1st speed 1/mi: 1400 Injection pump Contr.-rod trav.mm: 10.90...11.00 Pump designation : PES4A90D410RS2666 EP type number : 0 410 894 029 Del.quantity cm3/: 6.3...6.4 Governor Governor design. : RQV300...1400AB1065-100H.: (6.1...6.6) Governer no. : 0 420 212 169 Dispersion cm3/:0.3Customer-spec. information 100H.: (0.5) Customer : DAIMLER-BENZ 2nd speed 1/min: 300.0 Contr.-rod trav. m: 8.6...8.8 Del.quantity cm3/: 0.8...1.2 100H.: (0.6...1.4) Engine : 0M364 1st version kW : 66.0 1/min: 2800 Speed cm3/: 0.2 100H.: (0.4) Dispersion TEST BENCH REQUIREMENTS (B) Setting of injection pump with externally-mounted governor Calibrating-oil inlet temp. °C : 38...42 Overflow valve SLEEVE TRAVELS : 1 417 413 000 1st speed 1/min: 300 Sleeve travel mm: 0.80...1.30 2nd speed 1/min: 500 Inlet press., bar : 1.00 Sleeve travel mm: 2.30...2.80 3rd speed 1/min: 750 Calibrating nozzle-holder Sleeve travel mm: 4.10...4.30 4th speed 1/min: 1500 Sleeve travel mm: 8.50...8.60 : 0 681 343 009 assembly Opening pressure, bar : 172...175 SLEEVE POSITION Control-lever position Test inj. tubing : 1 680 750 015 Degree: -1 17min: 1500 Speed Outside diameter Cont.-rod travelmm: 15.20...17.80 x Wall thickness : 6.00x1.50x600 FULL-LOAD DELIV. AT FULL-LOAD STOP x Length mm (A) Injection pump setting values 1st version Insp. values in parentheses 1/min: 1400 Speed Del.quantity cm3/: 63.0...64.0 Set constant delivery quant. 1000H.: (61.0...66.0) cm3/ : 3.00 1000H.: (5.00) per values Dispersion START OF DELIVERY Test pressure, bar: 25...27 HIGHEST RATED SPEED Prestroke mm : 2.25...2.35 1st version : (2.20...2.40)

Control-lever position degrees: 58...66 Testing: 1st c-rod trav.mm : 9.90 Speed 1/min : 1450...1460 2nd c-rod trav.mm : 4.00 Speed 1/min: 1560...1590 1/min : 1630 4th speed C-rod trav.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 20...28 Testing: 1/min : 100 Speed C-rod trav.mm min : 10.20 Speed 1/min : 300 : 8.60...8.80 C-rod trav.mm CONSTANT REGULATION 1/min: 540...680 Speed TORQUE CONTROL Dimension a mm : 1.00 Torque-control curve - 1st version 1st speed 1/min : 1400 C-rod trav.mm : 10.90...11.00 2nd speed 1/min: 630 C-rod trav.mm : 12.20...12.30 3rd speed 1/min: 900 C-rod trav.mm : 11.60...11.80 SWITCH-OVER POINT 1/min : 220 (240) Speed FUEL-DELIVERY CHARACTERISTICS Speed $1/\min : 630$ Del.quantity cm3/: 55.5...58.5 1000H:: (53.0...61.0) Speed 1/min: 900 Del.quantity cm3/: 54.5...57.5 1000H.: (52.0...60.0) Remarks:

```
Cam sequence : 1-5-3-6-2-4
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
Test sheet
                                                       SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300
Tolerance + - : 0.50 (0.75)
                   : MAN 11.1P23
                    : 09.03.87
Edition
Superceeded
Calibrating oil : ISO-4113
                                                       SD mark cyl. no. : 6
Combination no.
                    : 0 400 846 516
                                                       BASIC SETTING
Injection pump
                                                       1st speed
                                                                      1/mi: 700
Pump designation : PES6A95D410LS2542
                                                       Contr.-rod trav.mm: 12.00...12.10
EP type number : 0 410 896 936
Governor
                                                       Del.quantity cm3/: 10.8...11.0
Governor design. : RQV250...1100AB1177L
Governer no.
                   : 0 420 212 162
                                                                     100H.: (10.6...11.2)
Customer-spec. information
                                                                     cm3/:0.3
Customer
                    : MAN
                                                       Dispersion
Engine
                    : D2566 M/MF
                                                                     100H.: (0.6)
1st version kW : 177.0
                                                                     1/min: 250.0
                                                       2nd speed
              1/min: 2200
                                                       Contr.-rod trav. m: 6.7...6.9
Speed
                                                       Del.quantity cm3/: 0.9...1.4
100H.: (0.6...1.6)
TEST BENCH REQUIREMENTS
                                                                     cm3/: 0.3
100H.: (0.5)
                                                       Dispersion
Calibrating-oil inlet temp. °C
                    : 38...42
                                                       (B) Setting of injection pump with
Overflow valve
                                                           externally-mounted governor
                    : 1 417 413 000
                                                       SLEEVE TRAVELS
Inlet press., bar: 1.00
                                                       1st speed 1/min: 150
                                                         Sleeve travel mm: 0.40...0.70
                                                      2nd speed 1/min: 550
Sleeve travel mm: 3.60...4.00
3rd speed 1/min: 900
Sleeve travel mm: 5.60...6.10
Calibrating nozzle-holder
                   : 0 681 343 009
 assembly
Opening
 pressure, bar : 172...175
                                                       4th speed 1/min: 1200
                                                         Sleeve travel mm: 9.50...10.20
Test inj. tubing : 1 680 750 014
                                                       SLEEVE POSITION
                                                       Control-lever position
                                                      Degree: -1
Speed 1/min: 1115
Cont.-rod travelmm: 15.20...17.80
Outside diameter
x Wall thickness
x Length mm
               : 6.00x2.00x600
                                                       FULL-LOAD DELIV. AT FULL-LOAD STOP
(A) Injection pump setting values
    Insp. values in parentheses
    Set constant delivery quant.
                                                       1st version
    per values ____
                                                                     1/min: 700
                                                       Speed
                                                      Del.quantity cm3/: 108.5...110.5
1000H.: (106.5...112.5)
Dispersion cm3/: 3.50
1000H.: (6.00)
START OF DELIVERY
Test pressure, bar: 25...27
                    : 1.50...1.60
Prestroke mm
                                                      HIGHEST RATED SPEED
                    : (1.45...1.65)
Contr.-rod trav.mm: 9.00...12.00
                                                       1st version
K11
```

Control-lever position degrees: 43...51 Testing: 1st c-rod trav.mm : 11.00 Speed 1/min : 1140...1150 2nd c-rod trav.mm : 4.00 Speed 1/min: 1180...1210 4th speed 1/min: 1300 C-rod trav.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 9...17 Testing: 1/min : 100 Speed C-rod trav.mm min: 8.20 1/min : 250 Speed C-rod trav.mm : 6.60...6.80 C-rod trav.mm : 2.00 1/min : 335...395 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 12.00...12.10 2nd speed 1/min : 500 C-rod trav.mm : 12.00...12.20 SWITCH-OVER POINT 1/min : 170 (190) Speed FUEL-DELIVERY CHARACTERISTICS Speed 1/min : 500 Del.quantity cm3/: 107.5...111.5 1000H.: (105.0...114.0) 1/min : 1100 Speed Del.quantity cm3/: 100.0...103.0 1000H:: (97.5...105.5) Remarks:

: MAN-NR. 2-7440

BOSCH INJ. PUMP TEST SPECIFICATIONS : 1-5-3-6-2-4 Cam sequence Note inst. in remarks column Test sheet SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 00.50 (0.75) : MAN 11,1P20 : 09.03.87 Edition Superceeded : 5.85 Calibrating oil : ISO-4113 SD mark cyl. no. : 6 : 0 400 846 518 Combination no. BASIC SETTING Injection pump 1/mi: 700 1st speed Pump designation : PES6A95D410LS2542 EP type number : 0 410 896 936 Contr.-rod trav.mm: 12.00...12.10 Governor Governor design.: RQV250...1100AB1177L Del.quantity cm3/: 10.8...11.0 Governer no. : 0 420 212 162 100H.: (10.6...11.2) Customer-spec. information cm3/:0.3Customer : MAN Dispersion : D2566 M/MF Engine 100H.: (0.6) 1st version kW : 177.0 1/min: 250.0 2nd speed Speed Contr.-rod trav. m: 6.7...6.9 1/min: 2200 Del.quantity cm3/: 0.9...1.4 100H.: (0.6...1.6) cm3/: 0.3 100H.: (0.5) TEST BENCH REQUIREMENTS Dispersion Calibrating-oil inlet temp. °C : 38...42 (B) Setting of injection pump with Overflow valve externally-mounted governor : 1 417 413 000 SLEEVE TRAVELS 1st speed 1/min: 150 Inlet press., bar : 1.00 Sleeve travel mm: 0.40...0.70 2nd speed 1/min: 550 Sleeve travel mm: 3.60...4.00 Calibrating nozzle-holder : 0 681 343 009 assembly 3rd speed 1/min: 900 Sleeve travel mm: 5.60...6.10 Opening pressure, bar : 172...175 4th speed 1/min: 1200 Sleeve trave! mm: 9.50...10.20 Test inj. tubing : 1 680 750 014 SLEEVE POSITION Control-lever position Degree: -1 1/min: 1115 Outside diameter x Wall thickness Speed : 6.00x2.00x600 Cont.-rod travelmm: 15.20...17.80 x Length mm FULL-LOAD DELIV. AT FULL-LOAD STOP (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 1st version 1/min: 700 per values ____ Speed Det.quantity cm3/: 108.5...110.5 1000H.: (106.5...112.5) Dispersion cm3/: 3.50 START OF DELIVERY Test pressure, bar: 25...27 1000H.: (6.00) : 1.50...1.60 Prestroke mm : (1.45...1.65) HIGHEST RATED SPEED Contr.-rod trav.mm: 9.00...12.00 1st version K13

Control-lever position degrees: 43...51 Testing: 1st c-rod trav.mm : 11.00 Speed 1/min: 1140...1150 2nd c-rod trav.mm: 4.00 Speed 1/min: 1180...1210 4th speed 1/min: 1300 C-rod trav.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 9...17 Testing: 1/min : 100 Speed C-rod trav.mm min: 8.20 Speed 1/min : 250 C-rod trav.mm : 6.60...6.80 C-rod trav.mm : 2.00 Speed 1/min : 335...395 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 12.00...12.10 2nd speed 1/min: 500 C-rod trav.mm : 12.00...12.20 SWITCH-OVER POINT 1/min : 170 (190) Speed FUEL-DELIVERY CHARACTERISTICS 1/min : 500 Del.quantity cm3/: 107.5...111.5 1000H.: (105.0...114.0) 1/min : 1100 Speed Del.quantity cm3/: 100.0...103.0 1000H.: (97.5...105.5) Remarks:

: MAN-NR. 2-7441

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5-3-6-2-4 Note inst. in remarks column Test sheet Edition Superceeded : MB 6,0 A : 09.03.87 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) : 6.85 Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 846 522 1st speed 1/mi: 1400 Injection pump Pump designation : PES6A90D410RS2667 Contr.-rod trav.mm: 11.10...11.20 EP type number : 0 410 896 080 Del.quantity cm3/: 6.3...6.4 Governor Governor design. : RQV300...1400AB1065-100H.: (6.1...6.6) Governer no. : 0 420 212 168 cm3/:0.3Dispersion Customer-spec. information Customer : DAIMLER-BENZ 100H.: (0.4) 2nd speed 1/min: 300.0 Contr.-rod trav. m: 8.9...9.1 Engine : OM 366 Del.quantity cm3/: 0.9...1.3 1st version kW : 100.0 100H.: (0.7...1.5) 1/min: 2800 Speed cm3/: 0.2 Dispersion TEST BENCH REQUIREMENTS 100H.: (0.4) (B) Setting of injection pump with externally-mounted gövernor Calibrating-oil inlet temp. °C : 38...42 Overflow valve SLEEVE TRAVELS : 1 417 413 000 1st speed 1/min: 300 Sleeve travel mm: 0.80...1.30 2nd speed 1/min: 500 Inlet press., bar: 1.00 Sleeve travel mm: 2.30...2.80 3rd speed 1/min: 750 Calibrating nozzle-holder Sleeve travel mm: 4.10...4.30 4th speed 1/min: 1500 Sleeve travel mm: 8.50...8.60 : 0 681 343 009 assembly Opening pressure, bar : 172...175 SLEEVE POSITION Control-lever position Degree: -1 Test inj. tubing : 1 680 750 015 17min: 1500 Speed Cont.-rod travelmm: 15.20...17.80 Outside diameter x Wall thickness FULL-LOAD DELIV. AT FULL-LOAD STOP x Length mm : 6.00x1.50x600 (A) Injection pump setting values 1st version 1/min: 1400 Insp. values in parentheses Speed Del.quantity cm3/: 63.5...64.5 Set constant delivery quant. 1000H.: (61.5...66.5) cm3/ : 3.00 per values ____ Dispersion 1000H.: (4.50) START OF DELIVERY Test pressure, bar: 25...27 HIGHEST RATED SPEED : 2.25...2.35 Prestroke mm 1st version : (2.20...2.40)

```
Control-lever
position degrees: 61...69
Testing:
1st c-rod trav.mm : 10.10
          1/min : 1460...1470
  Speed
2nd c-rod trav.mm : 4.00
          1/min : 1560...1590
  Speed
4th speed 1/min: 1630
  C-rod trav.mm : 0.00...1.00
LOWEST RATED SPEED I
Control-lever
position degrees: 21...29
Testing:
            1/min : 100
Speed
C-rod trav.mm min : 10.30
Speed 1/min : 300
                  : 8.90...9.10
C-rod trav.mm
CONSTANT REGULATION
Speed
            1/min : 540...680
TORQUE CONTROL
Dimension a mm : 1.20
Torque-control curve - 1st version
1st speed 1/min : 1400
  C-rod trav.mm : 11.10...11.20
  d speed 1/min : 500
C-rod trav.mm : 12.30...12.40
2nd speed
3rd speed 1/min: 900
 C-rod trav.mm : 11.90...12.10
4th speed 1/min: 1100
  C-rod trav.mm : 11.40...11.70
SWITCH-OVER POINT
           1/min : 220 (240)
Speed
FUEL-DELIVERY CHARACTERISTICS
           1/min : 500
Speed
Del.quantity cm3/: 52.0...54.0
            1000H.: (49.5...56.5)
            1/min : 900
Speed
Del.quantity cm3/: 55.0...58.0
1000H.: (52.5...60.5)
```

Cam sequence : 1- 5- 3- 6- 2- 4 BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) : MAN 11,4 B1 Edition : 09.03.87 Superceeded : 6.83 : ISO-4113 SD mark cyl. no. : 6 Calibrating oil Combination no. : 0 400 846 524 BASIC SETTING 1/mi: 700 Injection pump 1st speed Pump designation : PES6A95D41OLS2639-1 EP type number : 0 410 896 920 Contr.-rod trav.mm: 13.60...13.70 Governor Governor design.: RQ250/1100AB1137-7L Del.quantity cm3/: 12.0...12.2 Governer no. : 0 420 200 089 109H.: (11.8...12.4) Customer-spec. information Customer : MAN Dispersion cm3/:0.3Engine : D2566MUH/MUM 100H.: (0.6) 1st version kW : 176.0 1/min: 250.0 2nd speed Contr.-rod trav. m: 7.5...7.7 1/min: 2200 Speed Del.quantity cm3/: 0.9...1.5 100H.: (0.6...1.7) TEST BENCH REQUIREMENTS cm3/: 0.3 100H.: (0.5) Dispersion Calibrating-oil inlet temp. °C : 38...42 SLEEVE POSITION Overflow valve Control-lever position : 1 417 413 000 Degree: -1 1/min: 600 Cont.-rod travelmm: 15.60...16.40 Inlet press., bar : 1.00 Calibrating nozzle-holder FULL-LOAD DELIV. AT FULL-LOAD STOP : 0 681 343 009 assembly 1st version 1/min: 700 Opening. Speed Del.quantity cm3/: 120.5...122.5 1000H.: (118.5...124.5) Dispersion cm3/: 3.50 pressure, bar : 172...175 1000H.: (6.00) Test inj. tubing : 1 680 750 014 HIGHEST RATED SPEED Outside diameter x Wall thickness x Length mm : 6.00x2.00x600 Setting point: Speed 1/min : 600 Contr.-rod trav.mm: 16.0 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Testing: per values ____ 1st c-rod trav.mm : 12.60 1/min : 1145...1160 Speed START OF DELIVERY 2nd c-rod trav.mm : 4.00 Speed 1/min: 1270...1300 Test pressure, bar: 25...27 4th speed 1/min : 1350 C-rod trav.mm : 0.00...1.00 : 1.50...1.60 Prestroke mm : (1.45...1.55) Contr.-rod trav.mm: 9.00...12.00 LOWEST RATED SPEED I K17

Setting point w/out aux. spring Speed 1/min : 250 Contr.-rod trav.mm: 7.0 Testing: Speed 1/min: 100 C-rod trav.mm min: 8.50 Speed 1/min : 250 C-rod trav.mm : 6.90...7.10 C-rod trav.mm : 2.00 Speed 1/min: 395...435 Speed 1/min : 450 C-rod trav.mm max: 1.00 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1100 C-rod trav.mm : 13.60...13.70 2nd speed 1/min: 500 C-rod trav.mm : 13.60...13.80 FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 500
Del.quantity cm3/: 119.0...123.0
1000H.: (116.5...125.5)
Speed 1/min: 1100 Del.quantity cm3/: 134.5...137.5 1000H.: (132.0...140.0) Remarks: : MAN-NR. 2-7357

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BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                         Contr.-rod trav.mm: 9.00...12.00
                                                         Cam sequence : 1- 5- 3- 6- 2- 4
Note inst. in remarks column
Test sheet
                     : MB 6.0 A 3
: 30.03.87
                                                         SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300
Tolerance + - 0 : 0.50 (0.75)
Edition
Superceeded
Calibrating oil : ISO-4113
                                                         BASIC SETTING
Combination no. : 0 400 846 558
                                                                       1/mi: 1300
                                                         1st speed
Injection pump
Pump designation : PES6A90D410RS2667
                                                         Contr.-rod trav.mm: 11.20...11.30
EP type number
                     : 0 410 896 080
                                                         Del.quantity cm3/: 6.3...6.4
Governor
Governor design. : RQV300...1300AB1065-
                                                                        100H.: (6.1...6.6)
Governer no. : 0 420 212 200
                                                         Dispersion
                                                                        cm3/:0.3
Customer-spec. information
Customer
                     : DAIMLER-BENZ
                                                                        100H.÷ (0.5)
Engine
                     : OM 366
                                                         2nd speed
                                                                        1/min: 300.0
                                                         Contr.-rod trav. m: 9.1...9.3
                                                         Del.quantity cm3/: 0.9...1.5
100H.: (0.7...1.7)
Dispersion cm3/: 0.2
100H.: (0.4)
1st version kW : 97.0
               1/min: 2600
Speed
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. OC
                                                         (B) Setting of injection pump with externally-mounted governor
                     : 38...42
Overflow valve
                                                         SLEEVE TRAVELS
                     : 1 417 413 000
                                                         1st speed 1/min: 300
                                                         Sleeve travel mm: 0.80...1.30
2nd speed 1/min: 500
Sleeve travel mm: 2.30...2.80
3rd speed 1/min: 750
Inlet press., bar: 1.00
Calibrating nozzle-holder
               : 0 681 343 009
 assembly
                                                           Sleeve travel mm: 4.10...4.30
                                                         4th speed 1/min: 1500
Opening
                                                           Sleeve travel mm: 8.50...8.60
 pressure, bar : 172...175
                                                         SLEEVE POSITION
                                                         Control-lever position
                                                                       Degree: -1
1/min: 1500
Test inj. tubing : 1 680 750 015
                                                         Cont.-rod travelmm: 15.20...17.80
Outside diameter
x Wall thickness
                                                         FULL-LOAD DELIV. AT FULL-LOAD STOP
                     : 6.00X1.50X600
x Length mm
(A) Injection pump setting values
                                                         1st version
    Insp. values in parentheses
Set constant delivery quant.
                                                                        1/min: 1300
                                                         Speed
                                                         Del.quantity cm3/: 63.0...64.0
1000H:: (61.0...66.0)
Dispersion cm3/: 3.00
1000H:: (5.00)
    per values
START OF DELIVERY
Test pressure, bar: 25...27
                                                         HIGHEST RATED SPEED
                   : 2.25...2.35
Prestroke mm
                                                         1st version
                     : (2.20...2.40)
K19
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Control-lever position degrees: 54...62 Testing: 1st c-rod trav.mm : 10.20 Speed 1/min : 1340...1350 2nd c-rod trav.mm : 4.00 Speed 1/min: 1465...1495 4th speed 1/min: 1600 C-rod trav.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 20...28 Testing: 1/min : 100 Speed C-rod trav.mm min : 10.60 Speed 1/min : 300 : 9.10...9.30 C-rod trav.mm CONSTANT REGULATION Speed 1/min : 525...650 TORQUE CONTROL Dimension a mm : 1.00 Torque-control curve - 1st version 1st speed 1/min : 1300 C-rod trav.mm : 11.20...11.30 2nd speed 1/min : 750 C-rod trav.mm : 12.00...12.10 3rd speed 1/min : 950_ C-rod trav.mm : 11.70...11.90 4th speed 1/min: 1100 C-rod trav.mm : 11.30...11.60 SWITCH-OVER POINT 1/min : 220 (240) Speed FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 750 Del.quantity cm3/: 55.0...57.0 1000H.: (52.5...59.5)

```
Cam sequence : 1-5-3-6-2-4
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
Test sheet
Edition
Superceeded
                                                      SD ang. spacing ^{\circ} CS: 0-60-120-180-240-300 Tolerance + - ^{\circ} : 0.50 (0.75)
                    : LIE 8,4 B 1
                    : 09.03.87
Calibrating oil : ISO-4113
                                                      START OF DELIVERY DIFFERENCE
                                                      betw.c-rod trav.mm: 9.00...12.00
Difference OCS : 4.00...5.00
Combination no. : 0 400 846 562
Injection pump
Pump designation : PES6A100D410RS2687
                                                      BASIC SETTING
EP type number : 0 410 806 001
                                                                     1/mi: 1000
Governor
                                                      1st speed
Governor design. : RQV400...1000AB1231L
                                                      Contr.-rod trav.mm: 13.30...13.40
Governer no. : 0 420 212 206
                                                      Del.quantity cm3/: 13.6...13.8
Customer-spec. information
Customer
                   : LIEBHERR
                                                                    100H.: (13.4...14.0)
                    : D906T
Engine
                                                      Dispersion
                                                                    cm3/:0.3
1st version kW : 170.0
Speed
       1/min: 2000
                                                                    100H.: (0.6)
TEST BENCH REQUIREMENTS
                                                      2nd speed
                                                                    1/min: 400.0
                                                      Contr.-rod trav. m: 6.8...7.0
                                                      Del.quantity cm3/: 1.0...1.6
100H.: (0.7...1.8)
Calibrating-oil inlet temp. °C
                    : 40...45
                                                                    cm3/: 0.3
100H.: (0.5)
                                                      Dispersion
Overflow valve
                    : 1 417 413 000
                                                      (B) Setting of injection pump with
                                                          externally-mounted governor
Inlet press., bar: 1.00
                                                      SLEEVE TRAVELS
Calibrating nozzle-holder
 assembly
              : 0 681 343 009
                                                      1st speed 1/min: 440
                                                        Sleeve travel mm: 2.10...2.30
                                                      2nd speed 1/min: 500
Opening
pressure, bar : 172...175
                                                        Sleeve travel mm: 3.00...3.50
                                                      3rd speed 1/min: 585
                                                      Sleeve travel mm: 3.50...4.00
4th speed 1/min: 1045
Sleeve travel mm: 8.10...8.20
Test inj. tubing : 1 680 750 008
                                                      5th speed 1/min: 1135
Outside diameter
                                                        Sleeve travel mm: 9.40...9.70
x Wall thickness
                 : 6.00x2.00x600
x Length mm
                                                      SLEEVE POSITION
                                                      Control-lever position
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                                   Degree: -1
                                                      Speed 17min: 1065
Cont.-rod travelmm: 15.20...17.80
    per values
START OF DELIVERY
                                                      FULL-LOAD DELIV. AT FULL-LOAD STOP
Test pressure, bar: 25...27
                                                      1st version
Prestroke mm
                    : 2.70...2.80
                                                      Speed
                                                                    1/min: 1000
: (2.65...2.85)
Contr.-rod trav.mm: 9.00...12.00
                                                      Charge press. hPa : 700
```

Del.quantity cm3/: 136.5...138.5 1000H.: (134.5...140.5) Dispersion cm3/: 3.50 1000H.: (6.00) HIGHEST RATED SPEED 1st version Control-lever position degrees: 62...70 Testing: 1st c-rod trav.mm : 12.30 Speed 1/min : 1040...1050 2nd c-rod trav.mm : 4.00 Speed 1/min: 1130...1160 1/min : 1250 4th speed C-rod trav.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 12...19 Testing: Speed 1/min : 100 C-rod trav.mm min: 8.30 1/min : 400 Speed C-rod trav.mm : 6.80...7.00 CONSTANT REGULATION Speed 1/min : 425...530 TORQUE CONTROL Torque-control curve - 1st version 1/min : 1000 1st speed C-rod trav.mm : 13.30...13.40 2nd speed 1/min: 500 C-rod trav.mm : 13.30...13.50 compensator (LDA,ADA,ALDA) 1st version Setting 1/min : 500 Speed Pressure hPa : 700 Contr.-rod trav.mm: 13.30...13.40 Measurement 1/min : 500 Speed 1st pressure hPa : -C-rod trav.mm : 12.10...12.20 2nd pressure hPa : 435 C-rod trav.mm : 12.90...13.00 3rd pressure hPa : 410 : 12.30...12.50 C-rod trav.mm

FUEL-DELIVERY CHARACTERISTICS

Charge press. hPa : -Speed 1/min : 500

Del.quantity cm3/: 100.0...102.0

1000H.: (98.0...104.0)

Remarks:

K22

Speed

SWITCH-OVER POINT

1/min : 320 (340)

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 2 Note inst. in remarks column Test sheet : KHD 1 G 19 SD ang. spacing $^{\circ}$ CS: 0-120-240 Tolerance $+-^{\circ}$: 0.50 (0.75) : 09.03.87 Edition Superceeded : 10.85 : ISO-4113 Calibrating oil BASIC SETTING : 0 400 863 009 Combination no. 1/mi: 1250 1st speed Injection pump Pump designation : PES3A85D410/3RS2642 Contr.-rod trav.mm: 10.90...11.00 EP type number : 0 410 883 989 Governor Del.quantity cm3/ : 7.0...7.1 Governor design. : RSV325...1250A2C2168 100H.: (6.8...7.3) -2L : 0 420 232 437 Governer no. cm3/:0.3Dispersion Customer-spec. information Customer 100H.: (0.5) 2nd speed 1/min: 325.0 Contr.-rod trav. m: 7.9...8.1 Del.quantity cm3/: 0.7...1.3 Engine : F3L913 1st version kW : 45.0 1/min: 2500 100H.: (0.5...1.5) Speed cm3/:0.2Dispersion TEST BENCH REQUIREMENTS 100H.: (0.4) Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve Cont.-rod travelmm: 0.30...0.70 : 1 417 413 000 Governor-spring reload Inlet press., bar: 1.00 Notch setting x : 4.00 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening pressure, bar : 172...175 1/min: 1250 Speed Del.quantity cm3/: 70.5...71.5 1000H.: (68.5...73.5) Dispersion cm3/: 3.00 Test inj. tubing : 1 680 750 014 1000H.: (5.00) Outside diameter x Wall thickness HIGHEST RATED SPEED x Length mm : 6.00x2.00x600 1st version Control-lever (A) Injection pump setting values position degrees: 47...55 Insp. values in parentheses Testing: Set constant delivery quant. per values 1st c-rod trav.mm : 9.90 Speed 1/min: 1290...1300 2nd c-rod trav.mm : 4.00 START OF DELIVERY Speed 1/min: 1345...1375 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 : 2.50...2.60 1/min : 1365...1395 Prestroke mm Speed : (2.45...2.65) 1/min : 1520 4th speed

C-rod trav.mm : 0.30...1.40 LOWEST RATED SPEED I Control-lever position degrees: 18...26 Setting point w/out aux. spring Speed 1/min: 325 Contr.-rod trav.mm: 7.5 Testing: 1/min : 100 Speed C-rod trav.mm min: 19.50 Speed 1/min: 325 C-rod trav.mm : 7.90...8.10 C-rod trav.mm : 2.00 1/min : 480...540 Speed

TORQUE CONT JL Torque-control curve - 1st version 1st speed 1/min: 1250 C-rod trav.mm: 10.90...11.00

3rd speed 1/min : 800

C-rod trav.mm : 11.30...11.40 4th speed 1/min : 1045

C-rod trav.mm : 11.00...11.20

FUEL-DELIVERY CHARACTERISTICS Speed 1/min: 800 Del.quantity cm3/: 62.5...64.5 1000H.: (60.0...67.0)

Remarks:

: DX 3.50

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 2 Note inst. in remarks column Test sheet : KHD 1 G 30 SD ang. spacing CS: 0-120-240 Tolerance + - : 0.50 (0.75) Edition : 09.03.87 Superceeded Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 863 012 1st speed 1/mi: 1250 Injection pump Pump designation : PES3A85D410/3RS2731 Contr.-rod trav.mm: 9.90...10.00 EP type number : 0 410 883 988 Governor Del.quantity cm3/: 6.8...6.9 Governor design. : RSV325...1250A2C2168 100H.: (6.6...7.1) -3L : 0 420 232 475 Governer no. cm3/:0.3Dispersion Customer-spec. information Customer 100H.: (0.5) : F3L913 1/min: 325.0 Engine 2nd speed Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 1.0...1.6 1st version kW : 44.0 100H.: (0.8...1.8) Speed 1/min: 2500 cm3/:0.2Dispersion TEST BENCH REQUIREMENTS 100H.: (0.4) Calibrating-oil inlet temp. °C : 38...42 SLEEVE POSITION Control-lever position Degree: -3 1/min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Governor-spring reload Inlet press., bar : 1.00 Notch setting x : 4.50 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly Opening 1st version pressure, bar : 172...175 1/min: 1250 Speed Del.quantity cm3/: 68.5...69.5 1000H.: (66.5...71.5) Dispersion cm3/: 3.00 Test inj. tubing : 1 680 750 014 1000H.: (5.00) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x600 x Length mm 1st version Control-lever (A) Injection pump setting values position degrees: 42...50 Insp. values in parentheses Set constant delivery quant. Testing: ist c-rod trav.mm : 8.90 per values ____ 1/min : 1290...1300 Speed START OF DELIVERY 2nd c-rod trav.mm : 4.00 Speed 1/min: 1315...1345 Test pressure, bar: 25...27 3rd c-rod trav.mm : 4.00 1/min : 1335...1365 : 2.50...2.60 Speed Prestroke mm 4th speed 1/min : 1500 : (2.45...2.65)

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 13...21 Setting point w/out aux. spring Speed ~ 1/min : 325

Contr.-rod trav.mm: 5.5

Testing:

1/min : 100 Speed C-rod trav.mm min : 19.50

Speed 1/min: 325 C-rod trav.mm: 5.40...5.60 C-rod trav.mm: 2.00

1/min : 465...525 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1250

C-rod trav.mm : 9.90...10.00

2nd speed 1/min: 500

C-rod trav.mm : 10.30...10.40

4th speed 1/min: 960

C-rod trav.mm : 10.10...10.30

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 800

Del.quantity cm3/ : 58.0...60.0

1000H.: (55.5...62.5)

Remarks:

: TKS 2.60

Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 2 BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test sheet : KHD 3,0 D SD ang. spacing CS: 0-120-240 Tolerance + - : 0.50 (0.75) : 09.03.87 Edition Superceeded : ISO-4113 Calibrating oil BASIC SETTING Combination no. : 0 400 863 013 1st speed 1/mi: 1050 Injection pump Pump designation : PES3A90D410/3RS2740 Contr.-rod trav.mm: 9.10...9,20 EP type number : 0 410 893 006 Del.quantity cm3/: 6.4...6.5 Governor Governor design. : RSV325...1150A0C2219 100H.: (6.2...6.7) : 0 420 232 466 Governer no. cm3/:0.3Dispersion Customer-spec. information 100H.: (0.4) Customer 2nd speed 1/min: 375.0 Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 1.1...1.7 100H.: (0.9...1.9) : F3L913G Engine 1st version kW : 36.0 1/min: 2300 Speed cm3/: 0.2 Dispersion 100H.: (0.4) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Inlet press., bar: 1.00 Governor-spring reload Notch setting x : 3.25 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening pressure, bar : 172...175 Speed 1/min: 1050 Del.quantity cm3/: 64.0...65.0 1000H.: (62.0...67.0) Dispersion cm3/: 3.00 Test inj. tubing : 1 680 750 014 1000H.: (4.50) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x600 x Length mm 1st version Control-lever (A) Injection pump setting values position degrees: 56...64 Insp. values in parentheses Set constant delivery quant. Testing: per values ____ 1st c-rod trav.mm : ชี.10 Speed 1/min: 1090...1100 2nd c-rod trav.mm : 4.00 START OF DELIVERY Speed 1/min: 1120...1150 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 Speed 1/min: 1135...1165 4th speed 1/min: 1300 Prestroke mm : 2.50...2.60 : (2.45...2.65)

```
C-rod trav.mm : 0.30...1.40
LOWEST RATED SPEED I
Control-lever
position degrees: 23...31
Setting point w/out aux. spring
Speed
              1/min : 375
Contr.-rod trav.mm: 5.5
Testing:
Speed
                 1/min : 100
C-rod trav.mm min: 19.50
Speed 1/min: 375
C-rod trav.mm : 5.40...5.60
C-rod trav.mm : 2.00
Speed
           1/min : 470...530
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1050
C-rod trav.mm : 9.10...9.20

2nd speed 1/min : 350

C-rod trav.mm : 9.40...9.50

3rd speed 1/min : 600
   C-rod trav.mm : 9.20...9.40
FUEL-DELIVERY CHARACTERISTICS
                1/min ; 350
Speed
Del.quantity cm3/: 45.0...47.0
1000H.: (42.5...49.5)
Speed 1/min: 600
Del.quantity cm3/: 51.5...53.5
                 1000H.: (49.0...56.0)
```

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 4- 2 Note inst. in remarks column : KHD 4,1 D 5 Test sheet SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0.50 (0.75) : 09.03.87 Edition Superceeded Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 864 068 1/mi: 850 1st speed Injection pump Contr.-rod trav.mm: 13.50...13.60 Pump designation : PES4A85D410/3RS2638 EP type number : 0 410 884 950 Del.quantity cm3/: 8.3...8.4 Governor : RSV325...900A8C602-3 Governor design. 100H.: (8.1...8.6) : 0 420 232 460 Governer no. cm3/:0.3Dispersion Customer-spec. information 100H.: (0.4) Customer : BF4L913 2nd speed 1/min: 325.0 Engine Contr.-rod trav. m: 8.4...8.6 Del.quantity cm3/: 0.8...1.4 1st version kW : 64.0 100H.: (0.6...1.6) 1/min: 1800 Speed cm3/:0.2Dispersion 100H.: (0.4) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve Cont.-rod travelmm: 0.30...0.70 : 1 417 413 000 Inlet press., bar : 1.00 Governor-spring reload Notch setting x : 3.50 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening pressure, bar : 172...175 1/min: 850 Speed Del.quantity cm3/: 83.0...84.0 1000H.: (81.0...86.0) Dispersion cm3/: 3.00 1000H.: (4.50) Test inj. tubing : 1 680 750 014 Outside diameter HIGHEST RATED SPEED x Wall thickness : 6.00x2.00x600 1st version x Length mm Control-lever (A) Injection pump setting values position degrees: 31...39 Insp. values in parentheses Set constant delivery quant. Testing: 1st c-rod trav.mm : 12.50 per values ____ Speed 1/min: 890...900 2nd c-rod trav.mm : 4.00 START OF DELIVERY Speed 1/min: 955...985 th speed 1/min: 10²⁰ Test pressure, bar: 25...27 4th speed C-rod trav.mm : 0.30...1.40 : 2.50...2.60 Prestroke mm : (2.45...2.65)

L02

LOWEST RATED SPEED I Control-lever position degrees: 12...20 Setting point w/out aux. spring Speed 1/min: 325 Contr.-rod trav.mm: 8.5 Testing: 1/min : 100

Speed C-rod trav.mm min: 19.50

Speed 1/min: 325

C-rod trav.mm : 8.40...8.60

C-rod trav.mm : 2.00

Speed 1/min: 365...425

SET IDLE AUXILIARY SPRING Contr.-rod trav.mm: 2.00

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 850

C-rod trav.mm : 13.50...13.60 2nd speed 1/min : 500 C-rod trav.mm : 13.50...13.70

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 4- 2 Note inst. in remarks column Test sheet : KHD 1 G 31 SD ang. spacing CS: 0-90-180-270 Tolerance + - 0.50 (0.75) Edition : 09.03.87 Superceeded Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 864 069 1st speed 1/mi: 1175 Injection pump Pump designation : PES4A85D410/3RS2732 Contr.-rod trav.mm: 9.80...9.90 EP type number : 0 410 884 947 Del.quantity cm3/: 6.7...6.8 Governor Governor design. : RSV325...1175A8C2163 100H.: (6.5...7.0) -3L : 0 420 232 474 Governer no. cm3/:0.3Dispersion Customer-spec. information Customer 100H.: (0.4) : F4L913 Engine 2nd speed 1/min: 325.0 Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 1.0...1.6 1st version kW : 55.0 100H.: (0.8...1.8) 1/min: 2350 Speed cm3/:0.2Dispersion 100H.: (0.4) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 Overflow valve 17min: 800 Cont.-rod travelmm: 0.30...0.70 : 1 417 413 000 Governor-spring reload Notch setting x : 4.25 Inlet press., bar: 1.00 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly Opening 1st version pressure, bar : 172...175 1/min: 1175 Speed Del.quantity cm3/: 67.0...68.0 1000H.: (65.0...70.0) Dispersion cm3/: 3.00 Test inj. tubing : 1 680 750 014 1000H.: (4.50) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x600 x Length mm 1st version Control-lever (A) Injection pump setting values position degrees: 53...61 Insp. values in parentheses Set constant delivery quant. Testing: per values 1st c-rod trav.mm : 8.80 Speed 1/min: 1215...1225 2nd c-rod trav.mm: 4.00 START OF DELIVERY Speed 1/min: 1235...1265 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 : 2.50...2.60 1/min : 1255...1285 Prestroke mm Speed 1/min : 1420 : (2.45...2.65) 4th speed

L04

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 15...23 Setting point w/out aux. spring Speed 1/min: 325

Contr.-rod trav.mm: 5.6

Testing:

1/min : 100 Speed C-rod trav.mm min: 19.50 Speed 1/min: 325 C-rod trav.mm: 5.40...5.90 C-rod trav.mm: 2.00

Speed 1/min: 460...520

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1175

C-rod trav.mm : 9.80...9.90 2nd speed 1/min : 500 C-rod trav.mm : 10.30...10.40

FUEL-DELIVERY CHARACTERISTICS

1/min : 800 Speed

Del.quantity cm3/: 58.0...60.0 1000H.: (55.5...62.5)

Remarks:

: TKS 2.80

```
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                      Contr.-rod trav.mm: 9.00...12.00
                                                      Cam sequence : 1-5-3-6-2-
Note inst. in remarks column
Test sheet
Edition
Superceeded
                    : KHD 1 G 4
                                                      SD ang. spacing<sup>0</sup>CS: 0-60-120-180-240-300
Tolerance + - : 0.50 (0.75)
                   : 30.03.87
                   : 9.85
Calibrating oil : ISO-4113
                                                      BASIC SETTING
Combination no.
                   : 0 400 866 111
                                                      1st speed
                                                                    1/mi: 1200
Injection pump
Pump designation : PES6A85D410/3RS2611
                                                      Contr.-rod trav.mm: 11.30...11.40
                    : 0 410 886 902
EP type number
                                                      Del.guantity cm3/: 6.9...7.0
Governor
Governor design.
                    : RSV325...1200A0C2148
                                                                     100H.: (6.7...7.2)
Governer no. : 0 420 232 293
                                                                    cm3/:0.3
                                                      Dispersion
Customer-spec. information
Customer
                   : KHD
                                                                    100H.: (0.4)
                                                      2nd speed 1/min: 325.0
Contr.-rod trav. m: 8.4...8.6
Del.quantity cm3/: 0.8...1.4
100H.: (0.6...1.6)
                   : F6L913
Engine
1st version kW : 84.0
              1/min: 2400
Speed
                                                                    cm3/:0.2
                                                      Dispersion
TEST BENCH REQUIREMENTS
                                                                     100H.: (0.4)
Calibrating-oil inlet temp. °C
                                                      SLEEVE POSITION
                                                      Control-lever position
                  : 38...42
                                                                   Degree: -3
1/min: 800
Overflow valve
                                                      Cont.-rod travelmm: 0.30...0.70
                    : 1 417 413 000
Inlet press., bar: 1.00
                                                      Governor-spring reload
                                                      Notch setting x : 4.00
Calibrating nozzle-holder
             : 0 681 343 009
                                                      FULL-LOAD DELIV. AT FULL-LOAD STOP
 assembly
Opening
                                                      1st version
pressure, bar : 172...175
                                                                    1/min: 1200
                                                      Speed
                                                      Del.quantity cm3/: 69.5...70.5
1000H:: (67.5...72.5)
Dispersion cm3/: 3.00
Test inj. tubing : 1 680 750 014
                                                                   1000H.: (4.50)
Outside diameter
                                                      HIGHEST RATED SPEED
x Wall thickness
               : 6.00x2.00x600
                                                      1st version
x Length mm
                                                      Control-lever
                                                       position degrees: 53...61
(A) Injection pump setting values
    Insp. values in parentheses
    Set constant delivery quant.
                                                      Testing:
                                                      1st c-rod trav.mm : 10.30
    per values
                                                      Speed 1/min: 1240...1250
2nd c-rod trav.mm: 4.00
START OF DELIVERY
                                                      Speed 1/min: 1315...1345
4th speed 1/min: 1425
Test pressure, bar: 25...27
                                                        C-rod trav.mm : 0.30...1.40
                 : 2.50...2.60
Prestroke mm
                    : (2.45...2.65)
```

L06

LOWEST RATED SPEED I Control-lever position degrees: 28...36 Setting point w/out aux. spring Speed ` 1/min : 325 Contr.-rod trav.mm: 8.5 Speed 1/min: 325 C-rod trav.mm: 8.40...8.60 C-rod trav.mm: 2,00 1/min : 450...510 Speed SET IDLE AUXILIARY SPRING Contr.-rod trav.mm: 2.00 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min: 1200 C-rod trav.mm: 11.30...11.40 2nd speed 1/min: 500 C-rod trav.mm: 11.80...11.90 4th speed 1/min: 975 C-rod trav.mm : 11.60...11.90 FUEL-DELIVERY CHARACTERISTICS Speed 1/min : 800 Del.quantity cm3/: 63.5...65.5 1000H.: (61.0...68.0)

Remarks:

: DX

```
: 1-5-3-6-2-4
BOSCH INJ. PUMP TEST SPECIFICATIONS
                                                     Cam sequence
Note inst, in remarks column
Test sheet
                                                     SD ang. spacing CS: 0-60-120-130-240-300 Tolerance + - : 0.50 (0.75)
                   : KHD 1 G 24
Edition
                   : 09.03.87
Superceeded
                  : ISO-4113
                                                     BASIC SETTING
Calibrating oil
Combination no. : 0 400 866 118
                                                     1st speed
                                                                  1/mi: 1150
                                                     Contr.-rod trav.mm; 10.20...10.30
Injection pump
Pump designation : PES6A85D410/3RS2611
                                                     Del.quantity cm3/: 6.0...6.1
EP type number
                   : 0 410 886 902
Governor
Governor design. : RSV325...1150A8C604L
Governer no. : 0 420 232 319
                                                                   100H.: (5.8...6.3)
                                                                   cm3/:0.3
                                                     Dispersion
Customer-spec. information
                                                                   100H.: (0.5)
Customer
                   : KHD
Engine
                   : F6L913
                                                     2nd speed
                                                                   1/min: 325.0
                                                     Contr.-rod trav. m: 8.4...8.6
Del.quantity cm3/: 1.0...1.6
1st version kW : 78.0
                                                                   100H.: (0.8...1.8)
             1/min: 2300
Speed
                                                                   cm3/:0.2
                                                     Dispersion
                                                                   100H.: (0.4)
TEST BENCH REQUIREMENTS
Calibrating-cil inlet temp. C
                                                     SLEEVE POSITION
                   : 38...42
                                                     Control-lever position
                                                                  Degree: -3
1/min: 800
Overflow valve
                                                     Speed
                    : 1 417 413 000
                                                     Cont.-rod travelmm: 0.30...0.70
Inlet press., bar : 1.00
                                                     Governor-spring reload
                                                     Notch setting x : 4.00
Calibrating nozzle-holder
                 : 0 681 343 009
 assembly
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
Opening.
                                                     1st version
 pressure, bar : 172...175
                                                                   1/min: 1150
                                                     Speed
                                                     Del.quantity cm3/: 60.5...61.5
                                                                  1000H.: (58.5...63.5) cm3/ : 3.00
Test inj. tubing : 1 680 750 014
                                                     Dispersion
                                                                  1000H.: (5.00)
Outside diameter
x Wall thickness
                                                     HIGHEST RATED SPEED
               : 6.00x2.00x600
                                                     1st version
x Length mm
                                                     Control-lever
                                                      position degrees: 49...57
(A) Injection pump setting values
    Insp. values in parentheses
Set constant delivery quant.
                                                     Testing:
    per values ____
                                                     1st c-rod trav.mm: 9.20
                                                       Speed 1/min: 1190...1200
                                                     2nd c-rod trav.mm : 4.00
Speed 1/min : 1215...1245
3rd c-rod trav.mm : 4.00
START OF DELIVERY
Test pressure, bar: 25...27
                   : 2.50...2.60
                                                      Speed 1/min: 1240...1270
Prestroke mm
                   : (2.45...2.65)
                                                                  1/min : 1400
                                                     4th speed
                                                       C-rod trav.mm : 0.30...1.40
Contr.-rod trav.mm: 9.00...12.00
L08
```

LOWEST RATED SPEED I Control-lever position degrees: 13...21 Setting point w/out aux. spring Speed 1/min : 325 Contr.-rod trav.mm: 8.0 Testing:

Speed 1/min: 100 C-rod trav.mm min: 19.50 Speed 1/min: 325 C-rod trav.mm : 8.40...8.60 C-rod trav.mm : 2.00

1/min : 440...500 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1150 C-rod trav.mm: 10.20...10.30 2nd speed 1/min: 500 C-rod trav.mm: 10.20...10.40

FUEL-DELIVERY CHARACTERISTICS

1/min : 500 Speed

Del.quantity cm3/: 39.5...41.5 1000H:: (37.0...44.0) Speed 1/min: 800

Del.quantity cm3/: 48.0...50.0 1000H.: (45.5...52.5)

```
Cam sequence : 1-5- 3- 6- 2-
BOSCH INJ. PUMP TEST SPECIFICATIONS
Note inst. in remarks column
                                                    SD ang. spacing GS: 0-60-120-180-240-300 Tolerance * - : 0.50 (0.75)
                   : KHD 6,1 A 6
Test sheet
                    : 09.03.87
Edition
Superceeded
Calibrating oil
                 : ÎSO-4113
                                                     BASIC SETTING
                                                                    1/mi: 1150
                   : 0 400 866 119
Combination no.
                                                     1st speed
                                                     Contr.-rod trav.mm: 13.00...13.10
Injection pump
Pump designation : PES6A85D410/3RS2532
                                                     Det.quantity m3/: 8.0...8.1
                   : 0 410 886 909
EP type number
Governor
Governor design. : RSV325...1150A8C673L
                                                                   100H.: (7.8...8.3)
Governer no.
                  : 0 420 232 329
                                                     Dispersion
                                                                   cm3/:0.3
Customer-spec. information
                                                                   100H.: (0.4)
Customer
                   : KHD
                                                    2nd speed 1/min: 325.0
Contr.-rod trav. m: 7.9...8.1
Del.quantity cm3/: 1.1...1.7
100H.: (0.9...1.9)
Engine
                   : BF6L913
1st version kW : 112.0
             1/min: 2300
Speed
                                                                   cm3/:0.2
                                                     Dispersion
                                                                   100H.: (0.4)
TEST BENCH REQUIREMENTS
Calibrating-oil inlet temp. °C
                                                     SLEEVE POSITION
                   : 38...42
                                                     Control-lever position
                                                                 Degree: -3
1/min: 800
Overflow valve
                                                     Speed
                                                     Cont.-rod travelmm: 0.30...0.70
                   : 1 417 413 000
                                                     Governor-spring reload
Inlet press., bar: 1.00
                                                     Notch setting x : 3.75
Calibrating nozzle-holder
                : 0 681 343 009
                                                     FULL-LOAD DELIV. AT FULL-LOAD STOP
 assembly
Opening
                                                     1st version
pressure, bar : 172...175
                                                     Speed
                                                                   1/min: 1150
                                                     Del.quantity cm3/: 80.5...81.5
                                                                 1000H.: (78,5...83.5) cm3/: 3.00
Test inj. tubing : 1 680 750 014
                                                     Dispersion
                                                                  1000H.: (4.50)
Outside diameter
                                                     HIGHEST RATED SPEED
x Wall thickness
x Length mm
                  : 6.00x2.00x600
                                                     1st version
                                                     Control-lever
                                                     position degrees: 47...55
(A) Injection pump setting values
    Insp. values in parentheses
    Set constant délivery quant.
                                                     Testing:
    per values ____
                                                     1st c-rod trav.mm : 12.00
                                                                 1/min: 1190...1200
                                                       Speed
                                                     2nd c-rod trav.mm : 4.00
START OF DELIVERY
                                                     Speed 1/min: 1225...1255
3rd c-rod trav.mm: 4.00
Test pressure, bar: 25...27
                                                                1/min : 1265...1295
1/min : 1435
                   : 1.90...2.00
                                                      Speed
Prestroke mm
                   : (1.85...2.05)
                                                     4th speed
                                                      C-rod trav.mm : 0.30...1.40
Contr.-rod trav.mm: 9.00...12.00
L10
```

LOWEST RATED SPEED I
Control-lever
position degrees: 12...20
Setting point w/out aux. spring
Speed 1/min: 325
Contr.-rod trav.mm: 6.2

Testing:

Speed 1/min: 100 C-rod trav.mm min: 19.50 Speed 1/min: 325

C-rod tray.mm : 6.10...6.30

C-rod trav.mm : 2.00

Speed 1/min: 560...590

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1150

C-rod trav.mm : 13,00,...13.10

2nd speed 1/min: 500

C-rod trav.mm : 13.70...13.80

4th speed 1/min: 980

C-rod trav.mm : 13.30...13.50

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 800

Del.quantity cm3/: 81.0...83.0

1000H.: (78.5...85.5)

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 4- 2 Note inst. in remarks column Test sheet : MB 3,8 P 2 : 09.03.87 SD ang. spacing 0 CS: 0-90-180-270 Tolerance + - : 0.50 (0.75) Edition Superceeded Superceeded : 9.85 Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 874 222 1st speed 1/mi: 1345 Injection pump Pump designation : PES4A90D410RS2294 Contr.-rod trav.mm: 10.50...10.60 EP type number : 0 410 894 011 Del.quantity cm3/: 6.8...6.9 Governor Governor design. : RSV750...1400A0C2032 -1L 100H.: (6.6...7.1) Governer no. : 0 420 232 455 Dispersion cm3/:0.3Customer-spec. information 100H.: (0.1) Customer : DAIMLER-BENZ Engine : OM 314 2nd speed 1/min: 750.0 Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 1.7...2.3 1st version kW : 62.5 100H.: (1.5...2.5) cm3/: 0.2 1/min: 2800 Speed Dispersion TEST BENCH REQUIREMENTS SLEEVE POSITION Calibrating-vil inlet temp. °C Control-lever position Degree: -3 1/min: 800 : 38...42 Speed Cont.-rod travelmm: 0.30...1.00 Overflow valve : 1 417 413 000 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 1.00 1st version 1/min: 1345 Calibrating nozzle-holder Speed Del.quantity cm3/: 68.0...69.0 1000H:: (66.0...71.0) Dispersion cm3/: 3.00 1000H:: (1.50) : 0 681 343 009 assembly Opening pressure, bar : 172...175 HIGHEST RATED SPEED Test inj. tubing : 1 680 750 014 1st version Control-lever position degrees: 47...55 Outside diameter x Wall thickness : 6.00x2.00x600 x Length mm Testing: 1st c-rod trav.mm : 9.50 Speed 1/min : 1385...1395 (A) Injection pump setting values Insp. values in parentheses 2nd c-rod trav.mm : 4.00 Speed 1/min: 1420...1450 4th speed 1/min: 1500 Set constant delivery quant. per values ____ C-rod trav.mm : 0.30...1.70 START OF DELIVERY LOWEST RATED SPEED I Test pressure, bar: 25...27 Control-lever Prestroke mm : 2.15...2.25 : (2.10...2.30) position degrees: 26...34
Setting point w/out aux. spring

L12

Speed 1/min: 750 Contr.-rod trav.mm: 6.0 Testing: Speed 1/min: 100 C-rod trav.mm min: 19.50 Speed 1/min: 750 C-rod trav.mm: 5.90...6.10 C-rod trav.mm: 2.00 Speed 1/min: 765...795 Speed 1/min: 820 C-rod trav.mm max: 1.00

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 450 C-rod trav.mm: 12.20...12.40 2nd speed 1/min: 600 C-rod trav.mm: 10.50...10.70

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0.50 (0.75) Note inst. in remarks column : EIC 3,9 C 1 Test sheet : 28.11.86 Edition SD mark cyl. no. : 1 Superceeded Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 874 239 1st speed 1/mi: 1050 Injection pump Contr.-rod trav.mm: 12.60...12.70 Pump designation : PES4A90D320RS2634 Del.quantity cm3/: 8.1...8.2 EP type number : 0 410 894 026 Governor Governor design. : RSV300...1050A1C2153 100H.: (7.9...8.4) -1R : 0 420 233 193 cm3/: 0.2Governer no. Dispersion 190H.: (0.3) Customer-spec. information Customer : EICHER 2nd speed 1/min: 300.0 Contr.-rod trav. m: 10.9...11.1 Del.quantity cm3/: 4.1...4.6 100H.: (3.9...4.8) Dispersion cm3/: 0.2 Engine : EDL4 TEST BENCH REQUIREMENTS 100H.: (0.3) Calibrating-oil inlet temp. OC : 38...42 SLEEVE POSITION Control-lever position Overflow valve Degree: -3 1/min: 800 : 1 417 413 000 Speed Cont.-rod travelmm: 0.30...0.70 Inlet press., bar : 1.00 Governor-spring reload Calibrating nozzle-holder : 0 681 343 009 Notch setting x : 3.00 assembly FULL-LOAD DELIV. AT FULL-LOAD STOP Opening pressure, bar : 172...175 1st version 1/min: 1050 Speed Del.quantity cm3/: 81.0...82.0 Test inj. tubing : 1 680 750 014 1000H.: (79.0...84.0) Dispersion cm3/: 2.00 1000H.: (3.50) Outside diameter x Wall thickness : 6.00x2.00x600 x Length mm HIGHEST RATED SPEED (A) Injection sump setting values 1st version Insp. values in parentheses Set constant delivery quant. Control-lever position degrees: 46...54 per values ____ Testing: START OF DELIVERY 1st c-rod trav.mm : 11.60 1/min : 1090...1100 Test pressume, bar: 25...27 Speed 2nd c-rod trav.mm : 4.00 Speed 1/min: 1105...1135 3rd c-rod trav.mm: 4.00 Prestroke mm : 2.20...2.30 : (2.15...2.35) Contr.-rod trav.mm: 9.00...12.00 Speed 1/min: 1135...1165 1/min : 1300 Cam sequence : 1- 2- 4- 3 4th speed C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 15...23
Setting point w/out aux. spring
Speed 1/min: 300
Contr.-rod trav.mm: 10.5

Testing:

Speed 1/min : 100 C-rod trav.mm min: 19,50 Speed 1/min: 300

C-rod trav.mm : 10.90...11.10 C-rod trav.mm : 2.00

1/min : 420...480 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1050 C-rod trav.mm: 12.60...12.70 2nd speed 1/min: 500 C-rod trav.mm: 12.60...12.80

FUEL-DELIVERY CHARACTERISTICS

1/min : 500 Speed

Del.quantity cm3/: 69.5...71.5

1000H.: (67.0...74.0)

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 3- 4- 2 Note inst. in remarks column Test sheet : MB 4,0 C SD ang. spacing CS: 0-90-180-270 Tolerance + - : 0.50 (0.75) : 09.03.87 Edition Superceeded : ISO-4113 Calibrating oil BASIC SETTING : 0 400 874 243 Combination no. 1st speed 1/mi: 1200 Injection pump Contr.-rod trav.mm: 9.40...9.50 Pump designation : PES4A90D410RS2666-2L : 0 410 894 033 EP type number Del.quantity cm3/: 4.9...5.0 Governor Governor design. : RSV350...1200A2C1139 100H.: (4.7...5.2) -2L : 0 420 232 471 Governer no. cm3/:0.3Dispersion Customer-spec. information 100H.: (0.5) Customer : DAIMLER-BENZ 1/min: 350.0 : 0M364 Engine 2nd speed Contr.-rod trav. m: 8.1...8.7 Del.quantity cm3/: 1.0...1.2 100H.: (0.8...1.4) 1st version kW : 50.0 1/min: 2400 Speed cm3/:0.2Dispersion 1001.: (0.4) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 17min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Inlet press., bar : 1.00 Governor-spring reload Notch setting x : 5.00 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening pressure, bar : 172...175 1/min: 1200 Speed Del.quantity cm3/: 49.0...50.0 1000H.: (47.0...52.0) cm3/ : 3.00 Test inj. tubing : 1 680 750 015 Dispersion 1000H.: (5.00) Outside diameter HIGHEST RATED SPEED x Wall thickness : 6.00x1.50x600 1st version x Length mm Control-lever position degrees: 45...53 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Testing: 1st c-rod trav.mm : 8.40 per values ____ 1/min : 1240...1245 Speed 2nd c-rod trav.mm : 4.00 START OF DELIVERY Speed 1/min: 1286...1299 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 1/min : 1325...1355 : 2.25...2.35 Speed Prestroke mm 4th speed 1/min: 1530 : (2.20...2.40)

L16

C-rod trav.mm : 0.30...1.40 LOWEST RATED SPEED I Control-lever position degrees: -3 Setting point w/out aux. spring 1/min : 350 Speed Contr.-rod trav.mm: 8.40 Testing: 1/min : 100 Speed C-rod trav.mm min : 19.50 Speed 1/min : 350 C-rod trav.mm : 8.30...8.50 C-rod trav.mm : 2.00 Speed 1/min : 530...590 TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min : 1200 C-rod trav.mm : 9.40...9.50 2nd speed 1/min: 800 C-rod trav.mm : 10.50...10.60
3rd speed 1/min : 950
C-rod trav.mm : 10.30...10.50
4th speed 1/min : 1050 C-rod trav.mm : 9.70...10.00 FUEL-DELIVERY CHARACTERISTICS Speed 1/min : 800 Del.quantity cm3/: 45.0...47.0 1000H:: (42.5...49.5) Speed 1/min: 1000 Del.quantity cm3/: 48.0...51.0 1000H:: (45.5...53.5)

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.inm: 9.00...12.00 Cam sequence : 1- 3- 4- 2 Note inst. in remarks column Test sheet : MB 4,0,_C 1 SD ang. spacing CS: 0-90-180-270 Tolerance + - 0.50 (0.75) : 09.03.87 Edition Superceeded Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 874 244 1st speed 1/mi: 1200 Injection pump Pump designation : PES4A90D410RS2666-2 Contr.-rod trav.mm: 10.50...10.60 : 0 410 894 033 EP type number Del.quantity cm3/ : 5.5...5.6 Governor Governor design. : RSV350...1200A2C1139 = 3<u>L</u> 100H.: (5.3...5.8) : 0 420 232 472 Governer no. cm3/:0.3Dispersion Customer-spec. information Customer : DAIMLER-BENZ 100H.: (0.5) : 0M364 1/min: 350.0 Engine 2nd speed Contr.-rod trav. m: 8.1...8.9 1st version kW : 57.0 Del.quantity cm3/: 1.0...1.2 100H.: (0.8...1.4) 1/min: 2400 Speed cm3/: 0.2 100H.: (0.4) Dispersion TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Governor-spring reload Inlet press., bar: 1.00 Notch setting x : 4.75 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening pressure, bar : 172...175 1/min: 1200 Speed Del.quantity cm3/: 55.0...56.0 1000H.: (53.0...58.0) cm3/ : 3.00 1000H.: (5.00) Test inj. tubing : 1 680 750 015 Dispersion Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x1.50x600 1st version x Length mm Control-lever (A) Injection pump setting values position degrees: 54...62 Insp. values in parentheses Set constant delivery quant. Testing: per values ____ 1st c-rod trav.mm : 9.50 Speed 1/min: 1240...1245 2nd c-rod trav.mm: 4.00 START OF DELIVERY Speed 1/min: 1302...1315 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 1/min : 1335...1365 : 2.25...2.35 Prestroke mm Speed : (2.20...2.40) 4th speed 1/min: 1450 **L18**

```
C-rod trav.mm : 0.30...1.40
5th speed 1/min : 1240...1250
   C-rod trav.mm : 9.50
LOWEST RATED SPEED I
Control-lever
 position degrees: -3
Testing:
Speed
                 1/min : 100
C-rod trav.mm min : 19.50
Speed 1/min : 350
C-rod trav.mm : 8.50...8.70
C-rod trav.mm : 2.00
Speed 1/min : 520...580
TORQUE CONTROL
Torque-control curve - 1st version
1st speed 1/min : 1200
  C-rod trav.mm : 10.50...10.60
2nd speed 1/min: 800
C-rod trav.mm : 12.00...12.10
3rd speed 1/min : 950
  C-rod trav.mm : 11.70...11.90
4th speed 1/min: 1050
C-rod trav.mm: 11.00...11.30
FUEL-DELIVERY CHARACTERISTICS
Speed
                 1/min : 800
Del.quantity cm3/: 56.0...58.0

1000H.: (53.5...60.5)

Speed 1/min: 1050

Del.quantity cm3/: 56.0...58.0

1000H.: (53.5...60.5)
```

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0.50 (0.75) Note inst. in remarks column Test sheet : KHD 9,6 K 3 BASIC SETTING : 09.03.87 Edition Superceeded 1/mi: 1315 1st speed Calibrating oil : ISO-4113 Contr.-rod trav.mm: 8.30...8.40 Combination no. : 0 400 876 197 Del.quantity cm3/ : 7.6...7.7 Injection pump Pump designation : PES6A95D41ORS2416 100H.: (7.4...7.9) EP type number : 0 410 896 961 Governor Dispersion cm3/:0.3Governor design. : RSV300...1325A8C616L Governer no. : 0 420 232 332 100H.: (0.6) 2nd speed 1/min: 300.0 Contr.-rod trav. m: 5.9...6.1 Del.quantity cm3/: 1.0...1.6 Customer-spec. information Customer : KHD 100H.: (0.7...1.8) cm3/: 0.3 : F6L413FR Engine Dispersion 100H.: (0.5) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION Control-lever position : 38...42 Degree: -3 1/min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...1.00 Inlet press., bar: 1.00 Governor-spring reload Notch setting x : ? Calibrating nozzle-holder assembly ` : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP Opening 1st version Speed 1/min: 1315
Del.quantity cm3/: 76.0...77.0
1000H: (74.0...79.0)
Dispersion cm3/: 3.00 pressure, bar : 172...175 Test inj. tubing : 1 680 750 014 1000H.: (6.00) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x600 x Length mm 1st version Control-lever (A) Injection pump setting values position degrees: 65...73 Insp. values in parentheses Set constant delivery quant. Testing: per values ____ 1st c-rod trav.mm : 7.30 1/min : 1355...1365 Speed START OF DELIVERY 2nd c-rod trav.mm : 4.00 Speed 1/min: 1375...1405 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 Speed 1/min: 1390...1420 4th speed 1/min: 1550 : 1.90...2.00 : (1.85...2.05) Prestroke mm C-rod trav.mm : 0.00...1.70 Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Control-lever

position degrees: 22...30
Setting point w/out aux. spring
Speed 1/min: 300
Contr.-rod trav.mm: 5.5
Speed 1/min: 300
C-rod trav.mm: 5.90...6.10
C-rod trav.mm: 2.00
Speed 1/min: 550...610

TORQUE CONTROL

Torque-control curve - 1st version
1st speed 1/min: 1315
C-rod trav.mm: 8.30...8.40
2nd speed 1/min: 500
C-rod trav.mm: 9.20...9.30
3rd speed 1/min: 850

C-rod trav.mm : 8.60...8.90

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Note inst. in remarks column Test sheet : KHD 9,6 K 2 BASIC SETTING : 30.03.87 Superceeded 1/mi: 750 1st speed Calibrating oil : ISO-4113 Contr.-rod trav.mm: 9.20...9.30 Combination no. : 0 400 876 199 Del.quantity cm3/ : 7.6...7.7 Injection pump 100H.: (7.4...7.9) Pump designation : PES6A95D41ORS2416 EP type number : 0 410 896 961 Governor Dispersion cm3/:0.3Governor design. : RSV300...750A7(616L Governer no. : 0 420 232 322 100H.: (0.6) Customer-spec. information 1/min: 300.0 2nd speed Contr.-rod trav. m: 6.4...6.6

Del.quantity cm3/: 1.3...1.9

100H.: (1.0...2.1) Customer : KHD Engine : F6L413FR cm3/:0.3Dispersion TEST BENCH REQUIREMENTS 100H.: (0.5) Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 1/min: 800 Speed Cont.-rod travelmm: 0.30...0.70 Overflow valve : 1 417 413 000 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.00 1st version 1/min: 750 Speed Del.quantity cm3/: 76.0...77.0 Calibrating nozzle-holder 1000H.: (74.0...79.0) cm3/ : 3.00 : 0 681 343 009 assembly Dispersion 1000H.: (6.00) Opening pressure, bar : 172...175 HIGHEST RATED SPEED 1st version Test inj. tubing : 1 680 750 014 Control-lever position degrees: 42...50 Outside diameter x Wall thickness Testing: : 6.00x2.00x600 1st c-rod trav.mm : 8.20 x Length mm Speed 1/min: 780...790 2nd c-rod trav.mm : 4.00 Speed 1/min : 790...820 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 3rd c-rod trav.mm : 4.00 4th speed 1/min: 930 per values _____ : 0.30...1.40 C-rod trav.mm START OF DELIVERY Test pressure, bar: 25...27 LOWEST RATED SPEED I Control-lever : 1.90...2.00 : (1.95...2.05) position degrees: 19...27 Prestroke mm Setting point w/out *ux. spring Contr.-rod trav.mm: 9.00...12.00 1/min 🚼 🎉 🕽 🔾 Cam sequence : 1- 5- 3- 6- 2- 4 Contr.-rod trav.mm: 6.0 Testing:

Speed 1/min : 100 C-rod trav.mm min: 19.50 Speed 1/min: 300

C-rod trav.mm : 6.40...6.60 C-rod trav.mm : 2.00 Speed 1/min : 470...530

TORQUE CONTROL

Cam sequence : 1-5-3-6-2-4 BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column Test_sheet SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) : MB 5,7 Q 14 : 17.12.86 Edition Superceeded : 10.85 Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 876 255 1st speed 1/mi: 1300 Contr.-rod trav.mm: 11.40...11.50 Injection pump Pump designation : PES6A90D410RS2293 Del.quantity cm3/ : 7.5...7.6 EP type number : 0 410 896 031 Governor Governor design. : RSV350...1300A0C783L 100H.: (7.3...7.8) Governer no. : 0 420 232 409 cm3/:0.3Dispersion Customer-spec. information : DAIMLER-BENZ 100H.: (0.4) Customer 2nd speed 1/min: 350.0 Contr.-rod trav. m: 7.1...7.7 Del.quantity cm3/: 1.0...1.2 100H.: (0.8...1.4) Dispersion cm3/: 0.2 : OM 352 A Engine 1st version kW : 110.3 1/min: 2600 Speed 100H.: (0.4) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. OC SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve Speed : 1 417 413 000 Cont.-rod travelmm: 0.30...1.00 Governor-spring reload Inlet press., bar: 1.00 Notch setting x :? Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly Opening 1st version pressure, bar : 172...175 1/min: 1300 Speed Charge press. hPa : 700 Del.quantity cm3/ : 75.5...76.5 1000H.: (73.5...78.5) Dispersion cm3/: 3.00 Test inj. tubing : 1 680 750 014 1000H.: (4.50) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x600 x Length mm 1st version Control-lever (A) Injection pump setting values Insp. values in parentheses position degrees: 61...69 Set constant delivery quant. per values Testing: 1st c-rod trav.mm : 10.40 1/min : 1340...1345 START OF DELIVERY Speed 2nd c-rod trav.mm : 4.00 Test pressure, bar: 25...27 Speed 1/min: 1393...1406 3rd c-rod trav.mm: 4.00 : 2.15...2.25 Prestroke mm 1/min : 1430...1460 : (2.10...2.30) Speed vontr.-rod trav.mm: 9.00...12.00 4th speed 1/min : 1600 L25

C-rod trav.mm : 0.30...1.70 5th speed 1/min: 1345...1355 C-rod trav.mm : 10.40 LOWEST RATED SPEED I Control-lever position degrees: -3 Setting point w/out aux. spring Speed 1/min : 350 Contr.-rod trav.mm: 7.40 Testing: 1/min : 100 Speed C-rod trav.mm min: 19.00 Speed 1/min: 350 C-rod trav.mm: 7.30...7.50 C-rod trav.mm : 2.00 1/min : 470...530 Speed TORQUE CONTROL Torque-control curve - 1st version C-rod trav.mm : 11.40...11.50 3rd speed 1/min : 800 C-rod trav.mm : 11.50...11.60 4th speed 1/min : 1050 C-rod trav.mm : 11.40...11.60 compensator (LDA, ADA, ALDA) 1st version Setting 1/min : 500 hPa : 700 Speed Pressure Contr.-rod trav.mm: 11.50...11.60 Measurement 1/min : 500 Speed 1st pressure hPa : -: 10.70...10.80 C-rod trav.mm 2nd pressure hPa : 390 C-rod trav.mm : 11.40...11.50 3rd pressure hPa : 275 C-rod trav.mm : 10.90...11.10 FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 700 1/min : 500 Speed Del.quantity cm3/: 62.0...64.0 1000H.: (59.5...66.5) cm3/ : Dispersion 1000H.: (5.50) Charge press. hPa: 700 Speed 1/min : 800 Del.quantity cm3/: 67.0...69.0 1000H.: (64.5...71.5)

Dispersion cm3/: -1000H.: 5.50 Charge press. hPa: -Speed 1/min: 500 Del.quantity cm3/: 50.0...52.0 1000H.: (47.5...54.5) Dispersion cm3/: -1000H.: 5.50

Remarks: Hydraulic latching of starting delivery.

Latching at 0.4 bar ... 0.5 bar.

Unlatching at 0.15 bar...0.25 bar.

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5- 3- 6- 2- 4 Note inst. in remarks column : MB 5.7 Q 7 : 09.03.87 Test sheet SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Edition Superceeded : 8.85 Calibrating oil : ISO-4113 BASIC SETTING : 0 400 876 257 Combination no. 1st speed 1/mi: 1300 Injection pump : PES6A90D410RS2293Z Contr.-rod trav.mm: 8.20...8.30 Pump designation EP type number : 0 410 896 037 Del.quantity cm3/ : 4.4...4.5 Governor Governor design. : RSV350/1300A0C1101-2 100H.: (4.2...4.7) Governer no. : 0 420 232 411 cm3/:0.3Dispersion Customer-spec. information 100H.: (0.4) Customer : DAIMLER-BENZ : OM 352 1/min: 350.0 Engine 2nd speed Contr.-rod trav. m: 6.6...7.2 Del.quantity cm3/: 1.0...1.2 1st version kW : 69.9 100H.: (0.8...1.4) Speed 1/min: 2600 cm3/:0.2Dispersion 100H.: (-) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 17min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Governor-spring relead Inlet press., bar: 1.00 Notch setting x : 4.75 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening 1/min: 1300 pressure, bar : 172...175 Speed Del.quantity cm3/: 44.5...45.5 1000H.: (42.5...47.5) cm3/ : 3.00 Test inj. tubing : 1 680 750 003 Dispersion 1000H.: (4.50) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x500 x Length mm 1st version Control-lever (A) Injection pump setting values position degrees: 59...67 Insp. values in parentheses Set constant delivery quanta Testing: per values 1st c-rod trav.mm : 7.20 Speed 1/min: 3340...1345 2nd c-rod trav.mm : 4.00 START OF DELIVERY 1/min : 1364...137? Test pressure, bar: 25...27 Speed 3rd c-rod trav.mm : 4.00 1/min : 1390...1420 : 2.15...2.25 Prestroke mm Speed : (2.10...2.30) 4th speed 1/min : 1500 **L27**

C-rod trav.mm : 0.30...1.40 5th speed 1/min : 1345...1355 C-rod trav.mm : 7.20

LOWEST RATED SPEED I

Control-lever

position degrees: -3

Setting point w/out aux. spring

Speed 1/min : 350 Contr.-rod trav.mm: 6.70

Testing:

1/min : 100 Speed C-rod trav.mm min : 19.50 Speed 1/min : 350

C-rod trav.mm : 6.60...6.80 C-rod trav.mm : 2.00

1/min : 450...510 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1300

C-rod trav.mm : 8.20...8.30

2nd speed 1/min: 500 C-rod trav.mm: 9.10...9.20 3rd speed 1/min: 900

C-rod trav.mm : 8.90...9.10

4th speed 1/min: 1075

C-rod trav.mm : 8.30...8.60

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 500

Del.quantity cm3/: 39.0...42.0 1000H.: (36.5...44.5) Speed 1/min: 900 Del.quantity cm3/: 48.0...50.0 1000H.: (45.5...52.5)

SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - 0.50 (0.75) BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column BASIC SETTING : MB 5,7 Q 17 Test sheet Edition : 10.12.86 1st speed 1/mi: 1400 Superceeded Calibrating oil : ISO-4113 Scntr.-rod trav.mm: 9.70...9.80 : 0 400 876 259 Del.quantity cm3/: 6.3...6.4 Combination no. Injection pump 100H.: (6.1...6.6) Pump designation : PES6A90D410RS2293 cm3/:0.3EP type number : 0 410 896 031 Dispersion Governor : RSV350...1400A0C1080 100H.: (0.4) Governor design. : 0 420 232 408 1/min: 350.0 Governer no. 2nd speed Contr.-rod trav. m: 7.0...7.6 Del.quantity cm3/: 1.0...1.2 Customer-spec. information 100H.: (0.8...1.4) Customer : DAIMLER-BENZ cm3/: 0.2 100H.: (-) Dispersion TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. DC SLEEVE POSITION : 38...42 Control-lever position Degree: -3 17min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...0.70 Inlet press., bar: 1,00 Governor-spring reload Notch setting x : 3.50 Calibrating nozzle-holder FULL-LOAD DELIV. AT FULL-LOAD STOP assembly : 0 681 343 009 Opening 1st version pressure, bar : 172...175 1/min: 1400 Speed Del.quantity cm3/: 63.0...64.0 1000H.: (61.0...66.0) cm3/ : 3.00 Test inj. tubing : 1 680 750 014 Dispersion 1000H.: (4.50) Outside diameter HIGHEST RATED SPEED x Wall thickness : 6.00%2.00%600 1st version x Length mm .Control-lever (A) Injection pump setting values position degrees: 64...72 Insp. values in parentheses Set constant delivery quant. Testing: 1st c-rod trav.mm: 8.70 per values ____ 1/min : 1440...1445 Speed 2nd c-rod trav.mm : 4.00 START OF DELIVERY 1/min : 1473...1486 Test pressure, bar: 25...27 Speed 3rd c-rod trav.mm: 4.00 1/min : 1510...1540 : 2.15...2.25 Speed Prestroke mm 1/min : 1570 : (2.10...2.30) 4th speed Contr.-rod trav.mm: 9.00...12.00 C-rod trav.mm : 0.30...1.40 Cam sequence : 1-5-3-6-2-4 5th speed 1/min: 1445...1455 C-rod trav.mm : 8.70 LOWEST RATED SPEED I

Control-lever position degrees: -3 Setting point w/out aux. spring Speed 1/min: 350 Contr.-rod trav.mm: 7.50 Testing: Speed 1/min : 100 C-rod trav.mm min : 19.50 Speed 1/min : 350 C-rod trav.mm : 7.40...7.60 C-rod trav.mm : 2.00 1/min : 510...570 Speed TORQUE CONTROL Torque-control curve - 1st version 1st speed 1/min: 1400 C-rod trav.mm: 9.70...9.80 2nd speed 1/min: 600 C-rod trav.mm : 9.80...10.00 FUEL-DELIVERY CHARACTERISTICS 1/min : 600 Speed Del.quantity cm3/: 51.0...53.0 1000H:: (49.0...55.0) Speed 1/min: 850 Del.quantity cm3/: 56.0...58.0 1000H.: (53.5...60.5)

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column : MB 5.7 S 8 : 09.03.87 Test sheet Edition Superceeded : 1.85 Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 400 876 265 1st speed Injection pump Pump designation : PES6A90D410RS2293 EP type number : 0 410 896 031 Governor : RSV350...1400A0C2002 Governor design. : 0 420 232 417 Governer no. Dispersion Customer-spec. information Customer : DAIMLER-BENZ Engine : OM 352 2nd speed 1st version kW : 95.6 Speed 1/min: 2800 Dispersion TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Overflow valve : 1 417 413 000 Inlet press., bar : 1.00 Calibrating nozzle-holder : 0 681 343 009 assembly Opening 1st version pressure, bar : 172...175 Speed Test inj. tubing : 1 680 750 014 Outside diameter x Wall thickness : 6.00x2.00x600 x Length mm 1st version Control-lever (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Testing: per values ____ START OF DELIVERY Test pressure, bar: 25...27 : 2.15...2.25 C-rod trav.mm : 0.30...1.40 Prestroke mm : (2.10...2.30)

MO3

Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 5- 3- 6- 2- 4 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) 1/mi: 1380 Contr.-rod trav.mm: 10.00...10.10 Del.quantity cm3/ : 6.1...6.2 100H.: (5.9...6.4) cm3/:0.3100H.: (0.4) 1/min: 350.0 Contr.-rod trav. m: 7.1...7.3 Del.quantity cm3/: 0.9...1.5 100H.: (0.7...1.7) cm3/: 0.2 100H.: (0.4) Control-lever position Degree: -3 17min: 800 Cont.-rod travelmm: 0.30...0.70 Governor-spring reload Notch setting x : 5.00 FULL-LOAD DELIV. AT FULL-LOAD STOP 1/min: 1380 Del.quantity cm3/: 61.5...62.5 1000H: (59.5...64.5) Dispersion cm3/: 3.00 1000H.: (4.50) HIGHEST RATED SPEED position degrees: 64...72 1st c-rod trav.mm : 9.00 Speed 1/min: 1420...1430 2nd c-rod trav.mm: 4.00 Speed 1/min: 1485...1515 4th speed 1/min: 1600

LOWEST RATED SPEED I

Control-lever

position degrees: 31...39 Setting point w/out aux. spring

Speed 1/min: 350 Contr.-rod trav.mm: 7.2

Testing:

Speed 1/min: 100 C-rod trav.mm min: 19.50 Speed 1/min: 350 C-rod trav.mm: 7.10...7.30 C-rod trav.mm: 2.00 Speed 1/min: 560...620 Speed 1/min: 700

C-rod trav.mm max: 1.00

SET IDLE AUXILIARY SPRING Contr.-rod trav.mm: 2.00

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0.50 (0.75) Note inst. in remarks column : KHD 9,6 K 4 : 09.03.87 Test sheet Edition BASIC SETTING Superceeded Calibrating oil : ISO-4113 1st speed 1/mi: 1100 Combination no. : 0 400 876 279 Contr.-rod trav.mm: 10.60...10.70 Del.quantity cm3/ : 11.1...11.3 Injection pump Pump designation : PES6A95D410RS2416 100H.: (10.9...11.5) EP type number : 0 410 896 961 Governor : RSV325...1100A8C2040 cm3/:0.3Governor design. Dispersion : 0 420 232 288 Governer no. 100H.: (0.6) 2nd speed 1/min: 325.0 Contr.-rod trav. m: 5.4...5.6 Customer-spec. information Customer : KHD Del.quantity cm3/: 0.9...1.5 100H.: (0.6...1.7) Engine : BF6L413FRC cm3/: 0.3Dispersion TEST BENCH REQUIREMENTS 100H.: (0.5) Calibrating-oil inlet temp. OC SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve Speed : 1 417 413 000 Cont.-rod travelmm: 0.30...1.00 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar : 1.00 Calibrating nozzle-holder 1st version Speed 1/min: 1100 Charge press. hPa: 500 Del.quantity cm3/: 111.5...113.5 1000H.: (109.5...115.5) Dispersion cm3/: 3.00 : 0 681 343 009 assembly Opening. pressure, bar : 172...175 1000H.: (6.00) Test inj. tubing : 1 680 750 014 HIGHEST RATED SPEED Outside diameter 1st version x Wall thickness Control-lever : 6.00x2.00x600 position degrees: 45...53 x Length mm (A) Injection pump setting values Testing: Insp. values in parentheses Set constant delivery quant. 1st c-rod trav.mm : 9.60 1/min : 1140...1150 Spee d per values 2nd c-rod trav.mm : 3.70 1/min : 1165...1195 Speed 4th speed 1/min: 1330 START OF DELIVERY : 0.30...1.70 Test pressure, bar: 25...27 C-rod trav.mm LOWEST RATED SPEED I Prestroke mm : 1.75...1.85 : (1.70...1.90) Control-lever Contr.-rod trav.mm: 9.00...12.00 position degrees: 12...20 Cam sequence : 1- 5- 3- 6- 2- 4 Setting point w/out aux. spring 1/min : 325 Speed

M07

```
Contr.-rod trav.mm: 5.5
Testing:
            1/min : 100
Speed
C-rod trav.mm min : 19.00
           1/min : 325
Speed
C-rod trav.mm
               : 5.40...5.60
                  : 2.00
C-rod trav.mm
           1/min : 440...500
Speed
            1/min : 600
Speed
C-rod trav.mm max: 1.00
TORQUE CONTROL
Torque-control curve - 1st version
          1/min : 1100
1st speed
  C-rod trav.mm : 10.60...10.70
2nd speed 1/min: 550
  C-rod trav.mm : 10.60...10.80
3rd speed 1/min : 375
  C-rod trav.mm : 11.80...12.40
 compensator (LDA,ADA,ALDA)
1st version
Setting
            1/min : 500
Speed
            hPa : 500
Pressure
Contr.-rod trav.mm: 10.60...10.70
Measurement
            1/min : 500
Speed
1st pressure hPa : 355
  C-rod trav.mm : 10.30...10.40
2nd pressure hPa : 245
  C-rod trav.mm : 9.60...9.90
3rd pressure hPa : -
  C-rod trav.mm
                 : 9.50...9.60
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa : 500
           1/min : 900
Speed
Del.quantity cm3/: 114.0...117.0
            1000H.: (112.0...119.0)
Charge press. hPa : -
           1/min : 500
Speed
Del.quantity cm3/: 77.5...80.5
1000H.: (75.5...82.5)
Remarks:
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BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5-3-6-2-4 Note inst. in remarks column Test sheet : MB 5,7 V 5 : 09.03.87 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Edition Superceeded : 8.81 : ISO-4113 Calibrating oil BASIC SETTING : 0 400 876 294 Combination no. 1/mi: 1250 1st speed Injection pump Contr.-rod trav.mm: 12.30...12.40 Pump designation : PES6A90D410RS2596 EP type number : 0 410 896 073 Del.quantity cm3/: 7.6...7.7 Governor Governor design. : RSV350...1250A0B1142 100H.: (7.4...7.9) Governer no. : 0 420 232 248 cm3/:0.3Dispersion Customer-spec. information 100H.: (0.4) Customer : DAIMLER-BENZ : 0M352A 1/min: 350.0 Engine 2nd speed Contr.-rod trav. m: 9.2...9.4 Del.quantity cm3/: 2.0...2.7 1st version kW : 110.0 100H.: (1.8...2.9) 1/min: 2500 Speed cm3/:0.2Dispersion 100H.: (0.4) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve : 1 417 413 000 Cont.-rod travelmm: 0.30...1.00 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.00 Calibrating nozzle-holder 1st version Speed 1/min: 1250 Charge press. hPa: 700 : 0 681 343 009 assembly Del.quantity cm3/: 76.0...77.0 1000H.: (74.0...79.0) Opening pressure, bar : 172...175 Dispersion cm3/:3.001000H.: (4.50) Test inj. tubing : 1 680 750 014 HIGHEST RATED SPEED Outside diameter 1st version x Wall thickness Control-lever : 6.00x2.00x600 position degrees: 54...62 x Length mm (A) Injection pump setting values Testing: Insp. values in parentheses 1st c-rod trav.mm : 11.30 Set constant delivery quant. 1/min : 1290...1300 Speed per values 2nd c-rod trav.mm : 4.00 Speed 1/min: 1345...1375
3rd c-rod trav.mm: 4.00
Speed 1/min: 1390...1420
4th speed 1/min: 1525 START OF DELIVERY Test pressure, bar: 25...27 : 2.00...2.10 C-rod trav.mm : 0.30...1.70 Prestroke mm : (1.95...2.15)

M09

```
LOWEST RATED SPEED I
Control-lever
 position degrees: 20...28
Setting point w/out aux. spring
            1/min : 350
Speed
Contr.-rod trav.mm: 6.7
             1/min : 350
nm : 9.20...9.40
nm : 2.00
Speed
C-rod trav.mm
C-rod trav.mm
Speed
            1/min : 550...610
TORQUE CONTROL
Torque-control curve - 1st version
           1/min : 1250
1st speed
  C-rod trav.mm : 12.30...12.40
2nd speed 1/min: 500
C-rod trav.mm : 13.40...13.50
3rd speed 1/min : 980
  C-rod trav.mm : 12.80...13.00
 compensator (LDA,ADA,ALDA)
1st version
Setting
            1/min : 500
hPa : 700
Speed
Pressure
Contr.-rod trav.mm: 13.40...13.50
Measurement
            1/min : 500
Speed
1st pressure hPa : -
                   : 11.60...11.70
 C-rod trav.mm
2nd pressure hPa : 365
                   : 13.10...13.20
 C-rod trav.mm
3rd pressure hPa : 190
  C-rod trav.mm
                   : 12.40...12.60
FUEL-DELIVERY CHARACTERISTICS
1st version
Charge press. hPa: 700
             1/min : 750
Speed
Del.quantity cm3/: 79.0...82.0
1000H.: (77.0...84.0)
Charge press. hPa :
             1/min : 500
Speed
Del.quantity cm3/ : 51.5...53.5
             1000H.: (49.5...55.5)
Remarks:
```

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5- 3- 6- 2- 4 Note inst. in remarks column : SCL 7.4 C 1 : 17.12.86 Test sheet SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0.50 (0.75) Edition Superceeded Calibrating oil : ISO-4113 BASIC SETTING : 0 400 876 324 Combination no. 1st speed 1/mi: 1100 Injection pump Pump designation : PES6A95D41ORS2692 Contr.-rod trav.mm: 11.60...11.70 EP type number : 0 410 896 915 Del.quantity cm3/ : 10.8...11.0 Governor : RSV325...1100A1C2111 Governor design. 100H.: (10.6...11.2) : 0 420 232 383 Governer no. Dispersion cm3/:0.3Customer-spec. information : SCHLUETER 100H.: (0.6) Customer Engine : SDM 108 W6 1/min: 325.0 2nd speed Contr.-rod trav. m: 7.4...7.6 Del.quantity cm3/: 1.0...1.6 100H.: (0.7...1.8) Dispersion cm3/: 0.3 100H.: (0.5) 1st version kW : 77.0 1/min: 2200 Speed TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 17min: 800 Overflow valve Cont.-rod travelmm: 0.30...0.70 : 1 417 413 000 Governor-spring reload Inlet press., bar : 1.00 Notch setting x : 4.00 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly Opening 1st version pressure, bar : 172...175 Speed 1/min: 1100 Del.quantity cm3/: 108.5...110.5 1000H.: (106.5...112.5) Dispersion cm3/: 3.50 1000H.: (6.00) Test inj. tubing : 1 680 750 014 Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x600 x Length mm 1st version Control-lever (A) Injection pump setting values position degrees: 52...60 Insp. values in parentheses Set constant delivery quant. Testing: 1st c-rod trav.mm : 10.60 per values ____ Speed 1/min: 1140...1150 2nd c-rod trav.mm: 4.00 START OF DELIVERY Speed 1/min: 1170...1200 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 : 2.70...2.80 Speed 1/min : 1190...1220 Prestroke mm : (2.65...2.85) 4th speed 1/min: 1360 M1 1

C-rod trav.mm : 0.30...1.40

LOWEST RATED SPEED I

Control-lever

position degrees: 18...26 Setting point w/out aux. spring

Speed 1/min: 325 Contr.-rod trav.mm: 7.0

Testing:

1/min : 100 Speed C-rod trav.mm min: 19.50 Speed 1/min: 325 C-rod trav.mm : 7.40...7.60 C-rod trav.mm : 2.00

1/min : 510...570 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min: 1100 C-rod trav.mm: 11.60...11.70

2nd speed 1/min: 500

C-rod trav.mm : 12.90...13.00

3rd speed 1/min : 910

C-rod trav.mm : 12.20...12.40

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min : 500

Del.quantity cm3/: 102.0...105.0 1000H.: (99.5...107.5)

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Note inst. in remarks column Test sheet : KHD 1 G 16 : 09.03.87 BASIC SETTING Edition Superceeded : 10.85 : ISO-4113 1/mi: 1200 Calibrating oil 1st speed Combination no. : 0 400 876 326 Contr.-rod trav.mm: 12.40...12.50 Del.quantity cm3/: 8.4...8.5 Injection pump : PES6A85D410RS2591 Pump designation 100H.: (8.2...8.7) EP type number : 0 410 886 903 Governor cm3/:0.3Governor design. : RSV325...1159A8C2194 Dispersion Governer no. : 0.420.234.435100H.: (0.4) 2nd speed 1/min: 325.0 Contr.-rod trav. m: 7.9...8.1 Customer-spec. information Customer Del.quantity cm3/: 1.0...1.6 100H.: (0.8...1.8) Engine : BF6L913 cm3/: 0.2 Dispersion 100H.: (0.4) TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. C SLEEVE POSITION : 38...42 Control-lever position Degree: -3 1/min: 800 Overflow valve Speed : 1 417 413 000 Cont.-rod travelmm: 0.30.0.0.70 Inlet press., bar : 1.00 Governor-spring reload Notch setting x : 6.00 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening. pressure, bar : 172...175 Speed 1/min: 1200 Del.quantity cm3/: 84.0...85.0 1000H.: (82.0...87.0) cm3/ : 3.00 Test in j. tubing : 1 680 750 014 Dispersion 1000H.: (4.50) Outside diameter x Wall thickness HIGHEST RATED SPEED : 6.00x2.00x600 1st version x Length mm Control-lever position degrees: 57...65 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. Testing: per values ____ 1st c-rod trav.mm : 11.40 1/min : 1240...1250 Speed 2nd c-rod trav.mm : 4.00 START OF DELIVERY Speed 1/min: 1295...1325 3rd c-rod trav.mm: 4.00 Test pressure, bar: 25...27 1/min: 1340...1370 : 2.50...2.60 Prestroke mm Speed 1/min : 1515 *(2.45,...2.65)* 4th speed C-rod trav.mm : 0.30...1.40 Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5- 3- 6- 2- 4 LOWEST RATED SPEED I

M13

Control-lever

position degrees: 17...25 Setting point w/out aux. spring

Speed 1/min : 325 Contr.-rod trav.mm: 7.5

Testing:

1/min : 100 Speed C-rod trav.mm min: 19.50

Speed 1/min: 325

C-rod trav.mm : 7.40...7.60

C-rod trav.mm : 2.00

Speed 1/min: 630...690

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1200

C-rod trav.mm : 12.40...12.50

2nd speed 1/min: 500 C-rod trav.mm: 13.50...13.60 3rd speed 1/min: 925

C-rod trav.mm : 12.90...13.10

Remarks:

: DX 7.10

BOSCH INJ. PUMP TEST SPECIFICATIONS Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1-5-3-6-2-4 Note inst. in remarks column Test sheet Edition Superceeded : KHD 6,1 E 2 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) : 09.03.87 : 10.85 Calibrating oil : ISO-4113 BASIC SETTING : 0 400 876 330 Combination no. 1st speed 1/mi: 1400 Injection pump Pump designation : PES6A95D41ORS2471 Contr.-rod trav.mm: 10.90...11.00 EP type number : 0 410 896 952 Del.quantity cm3/ : 8.8...9.0 Governor Governor design. : RSV325...1400A2C2205 100H.: (8.6...9.2) Governer no. : 0 420 232 445 Dispersion cm3/:0.3Customer-spec. information 100H.: (0.6) Customer 2nd speed 1/min: 325.0 Contr.-rod trav. m: 7.5...7.7 Del.quantity cm3/: 1.0...1.6 100H.: (0.7...1.8) Dispersion cm3/: 0.3 100H.: (0.5) : PPM BF6L913C Engine 1st version kW : 125.0 Speed 1/min: 2800 TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C SLEEVE POSITION Control-lever position : 38...42 Degree: -3 17min: 800 Overflow valve Cont.-rod travelmm: 0.30...0.70 : 1 417 413 000 Governor-spring reload Inlet press., bar: 1.00 Notch setting x : 4.00 Calibrating nozzle-holder : 0 681 343 009 FULL-LOAD DELIV. AT FULL-LOAD STOP assembly 1st version Opening. pressure, bar : 172...175 Speed 1/min: 1400 Charge press. hPa: 700
Del.quantity cm3/: 88.0...90.0
1000H:: (86.0...92.0)
Dispersion cm3/: 3.50
1000H:: (6.00) Test inj. tubing : 1 680 750 014 Outside diameter x Wall thickness : 6.00x2.00x600 HIGHEST RATED SPEED x Length mm 1st version Control-lever (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. position degrees: 54...62 Testing: per values ____ 1st c-rod trav.mm : 9.90 1/min : 1440...1450 START OF DELIVERY Speed Test pressure, bar: 25...27 2nd c-rod trav.mm : 4.00 Speed 1/min: 1490...1520 3rd c-rod trav.mm : 4.00 Prestroke mm : 1.90...2.00 1/min : 1545...1575 : (1.85...2.05) Speed

M15

```
4th speed 1/min: 1675
  C-rod trav.mm : 0.30...1.40
LOWEST RATED SPEED I
Control-lever
 position degrees: 18...26
Setting point w/out aux. spring
Speed 1/min: 325
Contr.-rod trav.mm: 7.1
Testing:
Speed
             1/min : 100
C-rod trav.mm min: 19.50
Speed 1/min: 325
C-rod trav.mm: 7.50...7.70
C-rod trav.mm: 2.00
                    : 2.00
C-rod trav.mm
            1/min : 625...685
Speed
TORQUE CONTROL
Torque-control curve - 1st version
            1/min : 1400
1st speed
  C-rod trav.mm : 10.90...11.00
2nd speed 1/min: 500
  C-rod trav.mm : 10.90...11.10
 compensator (LDA, ADA, ALDA)
1st version
Setting
             1/min : 650
Speed
             hPa : 700
Pressure
Contr.-rod trav.mm: 10.90...11.10
Measurement
             1/min : 650
Speed
ist pressure hPa : -
 C-rod trav.mm : 10.20...10.30
2nd pressure hPa : 220
  C-rod trav.mm : 10.70...10.80
3rd pressure hPa : 180
  C-rod trav.mm : 10.50...10.60
FUEL-DELIVERY CHARACTERISTICS
Charge press. hPa: 700
Speed 1/min: 850
Del.quantity cm3/: 79.5...82.5
             1000H.: (77.0...85.0)
Charge press. hPa : -
             1/min : 650
Speed
Del.quantity cm3/: 64.0...66.0
1000H.: (62.0...68.0)
```

Cam sequence : 1-5-3-6-2-4 BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) : MB 6.0 C 4 : 28.11.86 Test sheet Edition Superceeded : ISO-4113 BASIC SETTING Calibrating oil : 0 400 876 334 1/mi: 700 Combination no. 1st speed Contr.-rod trav.mm: 12.20...12.30 Injection pump Pump designation : PES6A90D410RS2710-1 Del.quantity cm3/: 6.4...6.5 EP type number : 0 410 896 084 Governor : RSV350...750A0C2006-100H.: (6.2...6.7) Governor design. : 0 420 232 454 cm3/:0.3Governer no. Dispersion 100H.: (0.5) Customer-spec. information Gustomer : DAIMLER-BENZ 1/min: 350.0 2nd speed : OM 366 Contr.-rod trav. m: 8.2...8.4 Engine Del.quantity cm3/ : 0.6...1.2 100H.: (0.4...1.4) cm3/: 0.2 100H.: (0.4) 1st version kW : 54.0 Dispersion TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. C FULL-LOAD DELIV. AT FULL-LOAD STOP : 38...42 1st version 1/min: 700 Overflow valve Speed Del.quantity cm3/: 64.0...65.0 : 1 417 413 000 1000H.: (62.0...67.0) cm3/ : 3.00 1000H.: (5.00) Inlet press., bar : 1.00 Dispersion Calibrating nozzle-holder : 0 681 343 009 HIGHEST RATED SPEED assembly 1st version Opening Control-lever pressure, bar : 172...175 position degrees: 78...86 Testing: 1st c-rod trav.mm : 11.20 Speed 1/min : 750...755 Test inj. tubing : 1 680 750 015 Outside diameter 2nd c-rod trav.mm : 4.00 Speed 1/min: 775...788 x Wall thickness 1/min : 900 : 6.00x1.50x600 x Length mm 4th speed : 0.30...1.40 C-rod trav.mm (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. LOWEST RATED SPEED I Control-lever position degrees: 66...74
Setting point w/out aux. spring
Speed 1/min: 350 per values ____ START OF DELIVERY Contr.-rod trav.mm: 8.3 Test pressure, bar: 25...27 Prestroke mm : 2.25...2.35 Testing: : (2.20...2.40) 1/min : 100 Speed Contr.-rod trav.mm: 9.00...12.00 C-rod trav.mm min: 19.50 M17

SET IDLE AUXILIARY SPRING Contr.-rod trav.mm: 2.00

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing⁰CS: 0-60-120-180-240-300 Tolerance + - 0.50 (0.75) Note inst. in remarks column Test sheet : HAN 10,8 F5 Edition : 17.12.86 SD mark cyl. no. : 1 Superceeded Calibrating oil : ISO-4113 START OF DELIVERY DIFFERENCE betw.c-rod trav.mm: 8.50...9.50 Difference CS : 5.50...6.50 Combination no. : 0 401 076 007 Injection pump Pump designation : PE6A100D320RS3030-1 BASIC SETTING EP type number : 0 411 006 019 Governor 1st speed 1/mi: 1100 Governor design. : RSV350...1100A8C2217 Contr.-rod trav.mm: 10.20...10.30 Governer no. : 0 420 232 462 Del.quantity cm3/: 12.6...12.8 Customer-spec. information Customer : HANOMAG 100H.: (12.4...13.0) Engine : D964T Dispersion cm3/:0.3TEST BENCH REQUIREMENTS 100H.: (0.6) 2nd speed 1/min: 350.0 Contr.-rod trav. m: 6.6...6.8 Del.quantity cm3/: 1.5...2.1 Calibrating-oil inlet temp. °C : 38...42 100H.: (1.2...2.3) cm3/: 0.3 Overflow valve : 1 417 413 000 Dispersion 100H.: (0.5) Inlet press., bar : 1.00 SLEEVE POSITION Calibrating nozzle-holder Control-lever position assembly : 0 681 343 009 Degree: -3 17min: 800 Speed Opening Cont.-rod travelmm: 0.30...0.70 pressure, bar : 172...175 Governor-spring reload Notch setting x : 5.80 Test inj. tubing : 1 680 750 003 FULL-LOAD DELIV. AT FULL-LOAD STOP Outside diameter x Wall thickness 1st version Speed 1/min: 1100 Del.quantity cm3/: 126.0...128.0 x Length mm : 6.00x2.00x600 1000H.: (124.0...130.0) Dispersion cm3/: 3.50 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. 1000H.: (6.00) per values HIGHEST RATED SPEED START OF DELIVERY 1st version Test pressure, bar: 25...27 Control-lever position degrees: 53...61 Prestroke mm : 1.80...1.90 : (1.75...1.95) Testing: Contr.-rod trav.mm: 9.00...12.00 1st c-rod trav.mm : 9.20 Cam sequence : 1-5-3-6-2-4 Speed 1/min: 1140...1150 2nd c-rod trav.mm : 4.00 M19

Speed 1/min: 1175...1205 3rd c-rod trav.mm: 4.00

1/min : 1210...1240 Speed

LOWEST RATED SPEED I

Control-lever

position degrees: 22...30 Setting point w/out aux. spring

Speed 1/min : 350 Contr.-rod trav.mm: 6.2

Testing:

Speed 1/min : 100 C-rod trav.mm min: 19.50 Speed 1/min: 350

C-rod trav.mm : 6.60...6.80 C-rod trav.mm : 2.00

1/min : 500...560 Speed

TORQUE CONTROL

Torque-control curve - 1st version

1st speed 1/min : 1100

C-rod trav.mm : 10.20...10.30

2nd speed 1/min: 500

C-rod trav.mm : 11.10...11.20 4th speed 1/min : 940

C-rod trav.mm : 10.50...10.70

FUEL-DELIVERY CHARACTERISTICS

1/min : 750 Speed

Del.quantity cm3/: 140.0...143.0

1000H.: (137.5...145.5)

BOSCH INJ. PUMP TEST SPECIFICATIONS BASIC SETTING Note inst. in remarks column 1st speed 1/mi: 1100 Test sheet : DEE 6,6 B Contr.-rod trav.mm: 10,0 Edition : 7.86 Superceeded Del.quantity cm3/ : 10,4...10,6 Calibrating oil : ISO-4113 Dispersion cm3/:0.30Combination no. : 0 401 276 017 1/min: 400 2nd speed Contri-rod trav. m: 6,3 Injection pump Pump designation : PES6A100D410RS3020 Del.quantity cm3/: 1,2...1,6 Dispersion cm3/: 0,30 Governor Governor design. : RSV400...1100A2B660D SLEEVE POSITION Control-lever position Customer-spec. information Degree: LOSE Customer : JOHN DEERE Speed 17min: 800 Cont.-rod travelmm: 0,7...1.0 : 6404 A Engine Governor-spring reload TEST BENCH REQUIREMENTS Notch setting x : -Calibrating-oil inlet temp. °C : 38...42 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version 1/min: 1100 Inlet press., bar : 1.5 Speed Del.quantity cm3/: 104,0...106,0 1000H.: (102,0...108,0) Calibrating nozzle-holder : 0 681 343 009 assembly HIGHEST RATED SPEED Opening 1st version pressure, bar : 172...175 Control-lever position degrees: 40...48 Test inj. tubing : 9 689 750 014 Testing: 1st c-rod trav.mm : 9,00 1/min : 1145...1155 Outside diameter Speed x Wall thickness 2nd c-rod trav.mm : 4.8 : 6,00x2,00x600 Speed 1/min: 1200 x Length mm 4th speed 1/min: 1350 C-rod trav.mm : 0,3...1,7 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. LOWEST RATED SPEED I per values Control-lever position degrees: 17...25 START OF DELIVERY Setting point w/out aux. spring 1/min : 400 Speed : 2,0...2,1 : (1,95...2,15) : 1-5-3-6-2-4 Contr.-rod trav.mm: 5,8 Prestroke mm Speed 1/min: 480 C-rod trav.mm : 2,0...4,0 Cam sequence C-rod trav.mm : 6,3 Speed 1/min : 400 Speed 1/min : 600 SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0,5(0,75) C-rod trav.mm max: 1.0 TORQUE CONTROL Torque-control curve - 1st version SD mark cyl. no. : 1 1st speed 1/min: 1100

C-rod trav.mm : 10.0 2nd speed 1/min : 750 C-rod trav.mm : 10.5

compensator (LDA,ADA,ALDA)

1st version

Setting

Speed 1/min: 550 Pressure hPa: 900 Contr.-rod trav.mm: -

Measurement

Speed 1/min: 550

1st pressure hPa : 490 C-rod trav.mm : -

FUEL-DELIVERY CHARACTERISTICS

Speed 1/min: 750
Del.quantity cm3/: 113.0...116.0
1000H.: (110,0...119.0)

: 1- 12- 9- 4- 5- 8 - 11- 2- 3- 10- 7- 6 BOSCH INJ. PUMP TEST SPECIFICATIONS Cam sequence Note inst. in remarks column : GUS 31,8 A3 Test sheet SD ang. spacing CS: 0-45-60-105-120-165-Edition : 19.12.86 Superceeded 180-225-240-285-300-Calibrating oil : ISO-4113 Tolerance + - 0 : 0.50 (0.75) Combination no. : 0 401 830 709 BASIC SETTING Injection pump : PE12P13OA12ORS3094-2 Pump designation 1/mi: 900 1st speed EP type number : 0 411 830 705 Contr.-rod trav.mm: 8.50...8.60 Governor Governor design. : RQV350...900PA749 Governer no. : 0 421 813 480 Del.quantity cm3/: 18.8...19.1 100H.: (18.4...19.4) Customer-spec. information Customer : GUASCOR Dispersion cm3/:0.6: E318 Engine 100H.: (1.0) TEST BENCH REQUIREMENTS 1/min: 350.0 2nd speed Calibrating-oil inlet temp. OC Contr.-rod trav. m: 4.0...4.2 Del.quantity cm3/: 2.1...2.7 100H.: (1.7...3.1) Dispersion cm3/: 1.0 100H.: (1.4) : 38...42 Overflow valve : 1 417 413 025 (B) Setting of injection pump with Inlet press., bar: 1.50 externally-mounted governor Calibrating nozzle-holder : 1 688 901 019 SLEEVE TRAVELS assembly 1st speed 1/min: 350 Sleeve travel mm: 1.50...1.80 2nd speed 1/min: 750 Sleeve travel mm: 5.40...5.60 Opening. : 207...210 pressure, bar Perforated-plate 3rd speed 1/min: 900 Sleeve travel mm: 7.60...7.80 diameter mm : 0,8 SLEEVE POSITION : 1 680 750 074 Test inj. tubing 1/min: 940 Speed Cont.-rod travelmm: 15.20...17.80 Outside diameter FULL-LOAD DELIV. AT FULL-LOAD STOP x Wall thickness : 6.00x1.50x1000 x Length mm 1st version 1/min: 900 Speed (A) Injection pump setting values Del.quantity cm3/: 188.0...191.0 Insp. values in parentheses Set constant delivery quant. 1000H.: (184.5...194.5) per values ____ cm3/ : 6.00Dispersion 1000H.: (10.00) START OF DELIVERY HIGHEST RATED SPEED Test pressure, bar: 25...27 1st version : 3.60...3.70 Control-lever Prestroke mm : (3.55...3.75) position degrees: 61...69 Contr.-rod trav.mm: 9.00...12.00 M23

Testing: 1st c-rod trav.mm : 7.50 Speed 1/min : 940...950 2nd c-rod trav.mm : 4.00

Speed 1/min: 970...1000 4th speed 1/min: 1100 C-rod trav.mm: 0.00...1.00

LOWEST RATED SPEED I Control-lever

position degrees: 6...14

Testing:

Speed 1/min: 100 C-rod trav.mm min: 5.60 Speed 1/min: 350 C-rod trav.mm : 4.00...4.20

CONSTANT REGULATION

1/min : 355...455 Speed

Note inst. in remarks column

Test sheet : MB 19,1 I : 09.03.87 Edition Superceeded : 7.83

Calibrating oil : ISO-4113

: 0 401 840 050 Combination no.

Injection pump

Pump designation : PE12P110A320LS830 EP type number : 0 411 810 030

Governor Governor design. : RQ1150PA310R Governer no. : 0 421 801 071

Customer-spec. information

Customer : DAIMLER-BENZ

: 0M404A Engine

1st version kW : 386.0 1/min: 2300 Speed

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar: 1.50

Overflow

quantity min. 1/h: 150...170 Calibrating nozzle-halder

: 0 581 343 009 assembly

Opening pressure, bar : 172...175

Outside diameter x Wall thickness

: 6.00x1.50x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

: 3.20...3.30 Prestroke mm

: (3.15...3.35) Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 12- 1- 5- 9- 8- 3

SD ang. spacing CS: 0-45-60-105-120-165-180-225-240-285-300-345

Tolerance + - 0 : 0.50 (0.75)

SD mark cyl. no. : 12

BASIC SETTING

1st speed 1/mi: 1100

Contr.-rod trav.mm: 12.95...13.00

Del.quantity cm3/: 14.0...14.2

100H.: (13.7...14.4)

Dispersion cm3/:0.4

100H₃: (0.7)

2nd speed 1/min: 300.0 Contr.-rod trav. m: 7.4...7.6 Del.quantity cm3/: 1.4...2.0 100H.: (1.1...2.2) Dispersion cm3/: 0.4 100H.: (-)

(B) Setting of injection pump with externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 1980 Sleeve travel mm: 2.20...2.40

2nd speed 1/min: 1160 Sleeve travel mm: 5.70...5.90 3rd speed 1/min: 1240

Sleeve travel mm: 8.50...8.70 FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

1/min: 1100 Speed

Del.quantity cm3/: 140.0...142.0 1000H.: (137.5...144.5) Dispersion cm3/: 4.00 1000H.: (7.50)

HIGHEST RATED SPEED 1st version Control-lever position degrees: 27...35

Testing: 1st c-rod trav.mm : 11.90 Speed 1/min : 1160...1165

2nd c-rod trav.mm : 5.90 Speed 1/min : 1205...1215 4th speed 1/min : 1300 C-rod trav.mm : 0.00...1.00

SD ang. spacing⁰CS: 0-45-60-105-120-165-BOSCH INJ. PUMP TEST SPECIFICATIONS 180-225-240-285-300-Note inst. in remarks column 345 Tolerance + - 0 : 0.50 (0.75) Test sheet : MB 19,1 D 2 : 09.03.87 Edition SD mark cyl. no. : 12 Superceeded Calibrating oil : ISO-4113 BASIC SETTING 1/mi: 1000 Combination no. : 0 401 840 059 1st speed Injection pump Contr.-rod trav.mm: 12.90...13.00 Pump designation : PE12P110A320LS830 EP type number : 0 411 810 036 Del.quantity cm3/: 14.0...14.2 Governor 100H.: (13.7...14.4) Governor design. : RQ1050PA3745 Governer no. : 0 421 801 054 Dispersion cm3/:0.4Customer-spec. information 100H.: (0.7) Customer : DAIMLER-BENZ 2nd speed 1/min: 300.0 Contr.-rod trav. m: 7.3...7.5 Engine : 0M404A Del.quantity cm3/: 1.4...2.0 100H.: (1.1...2.2) Dispersion cm3/: 0.4 100H.: (-) 1st version kW : 336.0 TEST BENCH REQUIREMENTS Calibrating-oil inlet temp. °C FULL-LOAD DELIV. AT FULL-LOAD STOP : 38...42 Overflow valve 1st version : 1 417 413 025 1/min: 1000 Speed Del.quantity cm3/: 140.0...142.0 1000H.: (137.5...144.5) Dispersion cm3/: 4.00 1000H.: (7.50) Inlet press., bar: 1.50 Calibrating nozzle-holder : 0 681 343 009 assembly HIGHEST RATED SPEED Opening pressure, bar : 172...175 Testing: 1st c-rod tray.mm : 11.90 Speed 1/min: 1055...1060 Outside diameter 2nd c-rod trav.mm : 6.00 x Wall thickness Speed 1/min: 1095...1105 : 6.00x1.50x600 x Length mm 1/min : 1200 4th speed C-rod trav.mm : 0.00...1.00 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values START OF DELIVERY

: 3.20...3.30

Contr.-rod trav.mm: 9.00.2012.00

Cam sequence : 12- 1- 5- 9- 8- 3 Cam sequence : -4- 11- 10- 2- 6- 7

: (3.15...3,35)

Remarks:

Prestroke mm

Note inst. in remarks column

Test sheet Edition : MB 19,1 D 3 : 09.03.87

Superceeded

Calibrating oil : ISO-4113

Combination no. : 0 401 840 063

Injection pump

: PE12P110A320LS830Z Pump designation

: 0 411 810 033 EP type number

Governor

Governor design. : RQ900PA310R Governer no. : 0 421 801 8 : 0 421 801 059

Customer-spec. information

Customer : DAIMLER-BENZ

: 0M404A Engine

: 368.0 1st version kW

TEST BENCH REQUIREMENTS

Calibrating oil inlet temp. °C

: 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar : 1.50

Overflow

quantity min. 1/h: 150...170

Calibrating Mozzle-holder

: 0 681 343 009 assembly

Opening

pressure, bar : 172...175

Outside diameter

x Wall thickness

: 6.00x1.50x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant.

per values ____

START OF DELIVERY

: 3.20...3.30 Prestroke mm

: (3.15...3.35) Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 12- 1- 5- 9- 8-- 4- 11- 10- 2- 6- 7

C-rod trav.mm : 0.00...1.00

SD ang. spacing CS: 0-45-60-105-120-165-

180-225-240-285-300-

345

Tolerance + - 0 : 0.50 (0.75)

SD mark cyl. no. : 12

BASIC SETTING

1st speed 1/mi: 850

Contr.-rod trav.mm: 14.10...14.20

Del.quantity cm3/: 15.9...16.1

100H.: (15.6...16.3)

cm3/:0.4Dispersion

100H.: (0.7)

2nd speed 1/min: 300.0 Contr.-rod trav. m: 7.6...7.8 Del.quantity cm3/: 1.4...2.0

100H.: (1.1...2.2) cm3/: 0.4

Dispersion 100H.: (-)

(B) Setting of injection pump with externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 840

Sieeve travel mm: 2.10...2.30

2nd speed 1/min: 900
Sleeve travel mm: 5.20...5.40
3rd speed 1/min: 960

Sleeve travel mm: 9.20...9.40

FULL-LOAD DELIV. AT FULL-LOAD STOP

1st version

1/min: 850 Speed

Del.quantity cm3/: 159.0...161.0 1000H.: (156.5...163.5) Dispersion cm3/: 4.00

1000H.: (7.50)

HIGHEST RATED SPEED

Testing:

1st c-rod trav.mm : 13.10

Speed 1/min: 905...910 2nd c-rod trav.mm: 5.90 Speed 1/min: 940...950

4th speed 1/min: 1050

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-45-60-105-120-165-180-225-240-285-300-Note inst. in remarks column Test sheet 345 : MB 19.1 I 1 : 09.03.87 Tolerance + - 0 : 0.50 (0.75) Superceeded SD mark cyl. no. : 12 Calibrating oil : ISO-4113 BASIC SETTING Combination no. : 0 401 840 069 1st speed 1/mi: 1000 Injection pump Pump designation : PE12P110A320LS830 Contr.-rod trav.mm: 13.70...13.80 EP type number : 0 411 810 030 Del.guantity cm3/: 15.5...15.7 Governor Governor design. : RQ1050PA310 : 0 421 801 108 100H.: (15.2...15.9) Governer no. Customer-spec. information cm3/:0.4Dispersion : DAIMLER-BENZ Customer 100H_s: (0.7) Engine : 0M404A 2nd speed 1/min: 300.0 Contr.-rod trav. m: 7.3...7.5 Del.quantity cm3/: 1.4...2.0 100H.: (1.1...2.2) Dispersion cm3/: 0.4 1st version kW : 407.0 Speed 1/min: 2100 TEST BENCH REQUIREMENTS 100H.: (-) Calibrating-oil inlet temp. OC : 38...42 FULL-LOAD DELIV. AT FULL-LOAD STOP Overflow valve 1st version : 1 417 413 025 1/min: 1000 Speed Del.quantity cm3/: 155.0...157.0 1000H:: (152.5...159.5) Dispersion cm3/: 4.00 Inlet press., bar : 1.50 Calibrating nozzle-holder 1000H.: (7.50) : 0 681 343 009 assembly HIGHEST RATED SPEED Opening pressure, bar : 172...175 Testing: 1st c-rod trav.mm : 12.70 1/min : 1055...1060 Outside diameter Speed 2nd c-rod trav.mm : 5.90 x Wall thickness : 6.00x1.50x600 1/min : 1095...1105 x Length mm Speed 1/min : 1200 4th speed C-rod trav.mm : 0.00...1.00 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____ START OF DELIVERY Remarks: : 3.20...3.30 Prestroke mm : (3.15...3.35) Contr.-rod trav.mm: 9.00...12.00

Contr.-rod trav.mm: 7.00....2.2 Cam sequence : 12- 1- 5- 9- 8- 3 - 4- 11- 10- 2- 6- 7

Note inst. in remarks column

Test sheet : FIA 25 Edition : 09.03. Superceeded : 10.82 : FIA 25,7 A : 09.03.87 Calibrating oil : ISO-4113

Combination no. : 0 401 840 701

Injection pump

Pump designation : PE12P12OA92OLS3809

EP type number : 0 411 820 700

Governor

Governor design. : RQV300...950PA537 Governer no. : 0 421 813 263

Customer-spec, information : IVECO-FIAT Customer

: 8297,22 Engine

1st version kW : 480.0 Speed 1/min: 1900

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder

: 1 688 901 019 assembly

Opening

pressure, bar : 207...210

Perforated-plate

diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter

x Wall thickness

: 6.00x1.50x1000 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

Del.quantity cm3/: 191.0...193.0 1000H.: (188.0...196.0) Dispersion cm3/: 5.00 : 3.50...3.60 Prestroke mm : (3.45...3.65) Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 4- 9- 8- 5- 2- 11- 10- 3- 6- 7- 12 1000H.: (9.00) HIGHEST RATED SPEED 1st version Control-lever SD ang. spacing CS: 0-15-60-75-120-135position degrees: 52...60 180-195-240-255-300-SD ang. spacing CS: 315 Tolerance + - : 0.50 (0.75) Testing: 1st c-rod trav.mm : 9.80 Speed 1/min : 990...1000 2nd c-rod trav.mm : 4.00 SD mark cyl. no. : 12 Speed 1/min: 1105...1135 4th speed 1/min: 1250 BASIC SETTING C-rod trav.mm : 0.00...1.00 1/mi: 950 1st speed LOWEST RATED SPEED I Contr.-rod trav.mm: 10.80...10.90 Control-lever position degrees: 7...15 Del.quantity cm3/: 19.1...19.3 Testing: 100H.: (18.8...19.6) Speed 1/min : 100 C-rod trav.mm min: 6.60 Speed 1/min: 300 Dispersion cm3/:0.5C-rod trav.mm : 5.00...5.20 100H.: (0.9) CONSTANT REGULATION 2nd speed 1/min: 300.0 Contr.-rod trav. m: 5.0...5.2 Del.quantity cm3/: 2.1...2.7 100H.: (1.8...3.0) 1/min : 320...425 Speed compensator (LDA,ADA,ALDA) cm3/:0.8Dispersion 100H.: (1.2) 1st version Setting 1/min : 500 hPa : 700 (B) Setting of injection pump with externally-mounted governor Speed Pressure Contr.-rod trav.mm: 10.80...10.90 SLEEVE TRAVELS 1st speed 1/min: 300 Sleeve travel mm: 1.40...1.60 Measurement Speed 1/min: 500 2nd speed 1/min: 450 Sleeve travel mm: 3.50...3.90 1st pressure hPa : -C-rod trav.mm : 7.70...7.90 3rd speed 1/min: 800 Sleeve travel mm: 5.90...6.30 2nd pressure hPa : 260 C-rod trav.mm : 9.70...9.80 3rd pressure hPa : 200 4th speed 1/min: 950 Sleeve travel mm: 7.10...7.30 C-rod trav.mm : 8.30...8.70 SLEEVE POSITION Control-lever position FUEL-DELIVERY CHARACTERISTICS Charge press. hPa : -Degree: -1 17min: 1110 1/min : 950 Speed Del.quantity cm3/: 129.0...131.0 Cont.-rod travelmm: 15.20...17.80 1000H.: (126.0...134.0) FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Speed 1/min: 950 Charge press. hPa: 700 Remarks:

N₀5

BOSCH INJ. PUMP TEST SPECIFICATIONS Note inst. in remarks column

Test_sheet : MB 21,9 B 4 : 12.09.86 Edition

Superceeded

Calibrating oil : ISO-4113

: 0 401 840 732 Combination no.

Injection pump

Pump designation : PE12P120A320LS3819-

EP type number : 0 411 820 716

Governor

Governor design. : RQV350...1150PA493-6 Governer no. : 0 421 813 523

Customer-spec. information : DAIMLER-BENZ Customer

Engine : OM 424 LA

1st version kW : 452.0 1/min: 2300 Speed

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar: 1.50

Overflow

quantity min. 1/h: 150...\$60

Calibrating nozzle-holder

: 1 688 901 019 assembly

Opening

pressure, bar : 207...210

Perforated-plate

: 0,8 diameter mm

Test inj. tubing : 1 680 750 067

Outside diameter x Wall thickness

: 6.00x1.50x1000 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

```
STAPT OF DELIVERY
                                                       1st version
                                                                     1/min: 1150
Test pressure, bar: 25...27
                                                       Speed
                                                      Charge press. hPa : 700
                                                      Del.quantity cm3/: 180.0...182.0
1000H.: (177.0...185.0)
Dispersion cm3/: 5.00
1000H.: (9.00)
                    : 4.00...4.10
Prestroke mm
                    : (3.95...4.15)
Contr.-rod trav.mm: 9.00...12.00
Cam sequence : 12- 1- 5- 9- 8- 3-
4- 11- 10- 2- 6- 7
                                                      HIGHEST RATED SPEED
                                                       1st version
                                                      Control-lever
SD ang. spacing CS: 0-45-60-105-120-165-
                                                       position degrees: 61...69
                      180-225-240-285-300-
                      345
                                                       Testing:
                                                      1st c-rod trav.mm : 11.10
Speed 1/min : 1190...1200
Tolerance + - 0
                    : 0.50 (0.75)
                                                       2nd c-rod trav.mm : 4.00
SD mark cyl. no. : 12
                                                       Speed 1/min: 1235...1265
4th speed 1/min: 1350
BASIC SETTING
                                                         C-rod trav.mm : 0.00...1.00
1st speed 1/mi: 1150
                                                      LOWEST RATED SPEED I
Contr.-rod trav.mm: 12.10...12.20
                                                      Control-lever
                                                       position degrees: 8...16
Del.quantity cm3/: 18.0...18.2
                                                      Testing:
              100H.: (17.7...18.5)
                                                                    1/min : 100
                                                      Speed
                                                      C-rod trav.mm min : 6.20
                                                      Speed 1/min: 350
Dispersion cm3/: 0.5
                                                      C-rod trav.mm : 4.50...4.70
              100H.: (0.9)
                                                      CONSTANT REGULATION
2nd speed 1/min: 350.0
                                                      Speed 1/min: 400...600
Contr.-rod trav. m: 4.8...5.0
Del.quantity cm3/: 1.6...2.2
                                                       compensator (LDA,ADA,ALDA)
              100H.: (1.3...2.5)
              cm3/: 0.8
100H.: (1.2)
Dispersion
                                                      1st version
                                                      Setting
                                                                  1/min : 500
hPa : 700
(B) Setting of injection pump with
                                                      Speed
                                                      Pressure
    externally-mounted governor
                                                      Contr.-rod trav.mm: 12.10...12.20
SLEEVE TRAVELS
1st speed 1/min: 350
                                                      Measurement
Sleeve travel mm: 2.20...2.30
2nd speed 1/min: 510
Sleeve travel mm: 3.20...3.50
3rd speed 1/min: 1150
Sleeve travel mm: 7.50...8.80
                                                      Speed 1/min : 500
                                                      1st pressure hPa : -
                                                        C-rod trav.mm
                                                                          : 10.10,..10.30
                                                      2nd pressure hPa : 540
4th speed 1/min: 1200
                                                        C-rod trav.mm : 11.40...11.50
                                                      3rd pressure hPa : 470
  Sleeve travel mm: 8.90...9.10
                                                        C-rod trav.mm : 10.60...10.80
SLEEVE POSITION
                                                      SWITCH-OVER POINT
Control-lever position
                                                                   1/min : 270 (290)
             Degree: -1
                                                      Speed
             17min: 1180
Speed
Cont.-rod travelmm: 15.20...17.80
                                                      FUEL-DELIVERY CHARACTERISTICS
FULL-LOAD DELIV. AT FULL-LOAD STOP
                                                      1st version
```

80M

```
Charge press. hPa : 700
                1/min : 650
Speed
Del.quantity cm3/: 179.0...185.0
1000H.: (176.0...188.0)
                cm3/: 8.00
1000H.: (12.0)
Dispersion
Charge press. hPa: 700
                1/min : 1150
Speed
Del.quantity cm3/: 134.0...138.0
1000H.: (131.0...141.0)
                cm3/: 8.00
1000H.: (12.0)
Dispersion
Charge press. hPa : -
Speed 1/min : 5
Speed 1/min: 500
Del.quantity cm3/: 131.0...133.0
                1000H.: (128.0...136.0)
cm3/: 8.00
Dispersion
                1900H.: (12.0)
```

Note inst. in remarks column

Test sheet Edition : KHD 19,2 A : 09.03.87

Superceeded

Calibrating oil : ISO-4113

: 0 401 840 734 Combination no.

Injection pump

Pump designation : PE12P110A920LS3173 EP type number : 0 411 810 708

Governor Governor design. : RQV300...1075PA746

Governer no. : 0 421 813 477

Customer-spec. information Customer : KHD

: BF12L513 Engine

1st version kW : 333.0 Speed 1/min: 2150

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. ^DC : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder

: 0 681 343 009 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter

x Wall thickness

x Length mm : 6.00x1.50x600

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

: 2.80...2.90 Prestroke mm

: (2,75...2.95)

Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 4- 9- 8- 5-

11- 10- 3- 6- 7- 12	Dispersion cm3/ : 5.00 1000H.: (8.00)
SD ang. spacing 0 (3) 0-15-60-75-120-135- 180-195-240-255-300- 315	HIGHEST RATED SPEED 1st version Control-lever position degrees: 5058
Tolerance + - 0 : 0.50 (0.75)	Testing:
SD mark cyl, no. : 1	1st c-rod trav.mm : 10,90 Speed 1/min : 11151125
BASIC SETTING	2nd c-rod trav.mm : 4.00 Speed 1/min : 12151245
1st speed	4th speed
Contrrod trav.mm: 11.9042.00	LOWEST RATED SPEED I
Del.quantity cm3/ : 14.815.2	Control-lever position degrees: 1523
100H.: (14.615.4)	
Dispersion cm3/: 0.5	Testing: Speed 1/min: 100
100H.: (0.8)	C-rod trav.mm min : 8.10 Speed 1/min : 300
2nd speed 1/min: 300.0	C-rod trav.mm : 6.606.80
Contrrod trav. m: 6.66.8 Del.quantity cm3/: 1.52.1	CONSTANT REGULATION Speed 1/min: 315465
100H.: (1.22.3)	•
Dispersion cm3/; 0.7 100H.: (1.0)	compensator (LDA,ADA,ALDA)
(B) Setting of injection pump with externally-mounted governor SLEEVE TRAVELS 1st speed 1/min: 300 Sleeve travel mm: 1.301.40	1st version Setting Speed 1/min : 450 Pressure hPa : 750 Contrrod trav.mm: 12.2012.30
2nd speed 1/min: 380 Sleeve travel mm: 2.302.70	Measurement Speed 1/min : 450
3rd speed 1/min: 430	·
Sleeve travel mm: 2.803.30 4th speed 1/min: 700	1st pressure hPa : - C-rod trav.mm : 10.7010.80
Steeve travel mm: 5-305.60	2nd pressure hPa : 410 C-rod trav.mm : 11.6011.70
Sleeve travel mm: 8.408.60	C-rod trav.mm : 11.6011.70 3rd pressure hPa : 350 C-rod trav.mm : 11.0011.20
SLEEVE POSITION	
Control-lever position Degree: -1	SWITCH-OVER POINT Speed 1/min : 220 (240)
Speed 17min: 1120 Controd travelmm: 15.2017.80	FUEL-DELIVERY CHARACTERISTICS
FULL-LOAD DELIV. AT FULL-L()AD STOP	1st version
1st version	Charge press. hPa : 750 Speed 1/min : 650
Speed 1/min: 1075 Charge press. hPa: 750	Del.quantity cm3/: 152.0156.0 1000H.: (149.0159.0)
Del.quantity cm3/: 148.0152.0 1000H.: (146.0154.0)	Charge press. hPa : - Speed 1/min : 450
N11	·

Del.quantity cm3/: 118.0...122.0 1000H.: (115.0...125.0) Remarks:

Note inst. in remarks column

Test sheet : MB 11.8 F Edition : 09.03.87 Superceeded : 10.83 Calibrating oil : ISO-4113 : MB 11,8 F

Combination no. : 0 401 846 398

Injection pump

Pump designation : PE6P110A720R\$371 EP type number : 0 411 816 123

Governor

Governor design. : RQ300/1100PA424R Governer no. : 0 421 801 086

Customer-spec. information

Customer : DAIMLER-BENZ

: 0M355A Engine

1st version kW : 206.0 Speed 1/min: 2200

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. OC : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar : 1.50

Overflow

quantity min. 1/h: 100...120

Calibrating nozzle-holder

assembly : 0 681 343 009

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 015

Outside diameter

x Wall thickness

: 6.00x1.50x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values

START OF DELIVERY

Test pressure, bar: 25...27

Prestroke mm : 2.80...2.90 4th speed 1/min : 1350 : (2.75...2.95) Contr.-rod trav.mm: 9.00...12.00 C-rod trav.mm : 0.00...1.00 Cam sequence : 1-5-3-6-2-4 LOWEST RATED SPEED I Setting point w/out aux. spring Speed 1/min : 300 Contr.-rod trav.mm: 6.2 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Testing: 1/min : 100 Speed SD mark cyl. no. : 1 C-rod trav.mm min: 8.20 1/min : 300 Speed C-rod trav.mm : 6.10...6.30 C-rod trav.mm : 2.00 BASIC SETTING 1/min : 410...450 1/mi: 1100 1st speed Speed Contr.-rod trav.mm: 11.70...11.80 TORQUE CONTROL Dimension a mm Torque-control curve - 1st version Del.quantity cm3/: 16.0...16.2 1st speed 1/min: 1100 C-rod trav.mm : 11.70...11.80 2nd speed 1/min : 650 100H.: (15.7...16.4) Dispersion cm3/:0.4C-rod trav.mm : 11.70...11.90 100H.: (0.8) compensator (LDA, ADA, ALDA) 2nd speed 1/min: 300.0 Contr.-rod trav. m: 5.9...6.1 1st version Del.quantity cm3/: 1.4...2.0 100H.: (1.1...2.2) Dispersion cm3/: 0.4 100H.: (0.7) Setting Speed 1/min: 500 Pressure hPa: 700 Contr.-rod trav.mm: 11.70...11.80 SLEEVE POSITION Measurement 1/min : 500 Control-lever position Speed Degree: -2 17min: 650 1st pressure hPa : -C-rod trav.mm : 11.00...11.10 2nd pressure hPa : 390 C-rod trav.mm : 11.50...11.60 3rd pressure hPa : 350 Cont.-rod travelmm: 19.20...20.80 FULL-LOAD DELIV. AT FULL-LOAD STOP C-rod trav.mm : 11.20...1î.30 1st version Speed 1/min: 1100 SWITCH-OVER POINT Charge press. hPa : 700 Del.quantity cm3/: 160.0...162.0 1000H.: (157.5...164.5) Dispersion cm3/: 4.00 *000H.: (8.00) 1/min : 220 (240) Speed FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : 700 HIGHEST RATED SPEED 1/min : 600 Speed Del.quantity cm3/ : 156.0...160.0 Setting point: 1000H.: (153.0...163.0) Speed 1/min : 650 Contr.-rod trav.mm: 20.0 cm3/:6.00Dispersion 1000H.: (9.00) Charge press. hPa: -Speed 1/min: 500 Del.quantity cm3/: 135.0...137.0 1000H.: (132.0...140.0) Testing: 1st c-rod trav.mm : 10.70 Speed 1/min: 1140...1150 2nd c-rod trav.mm: 4.00 Speed 1/min : 1190...1220

N14

Dispersion cm3/: 6.00 1000H.: (9.00)

Note inst. in remarks column

Test sheet : PEN 7,0 K 1 Edition : 12.09.86

Superceeded

Calibrating oil : ISO-4113

: 0 401 846 455 Combination no.

Injection pump

Pump designation : PE6P110A320RS367Y : 0 411 816 132 EP type number

Governor

Governor design. : RQV250...1000PA394

Governer no. : 0 421 813 241

Customer-spec. information

: VOLVO-PENTA Customer

: TMD 70 C Engine

1st version kW : 154.5 Speed 1/min: 2000

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar : 1.50

Calibrating nozzle-holder

: 0 681 343 009 assembly

Opening

pressure, bar : 172...175

Test inj. tubing : 1 680 750 004

Outside diameter

x Wall thickness

: 6.00x1.50x600 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 3.00...3.10 Prestroke mm

: (2.95...3.15)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1-5- 3- 6- 2- 4 SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0.50 (0.75) SD mark cyl. no. : 1 BASIC SETTING 1/mi: 900 1st speed Contr.-rod trav.mm: ? Del.quantity cm3/: 8.5...8.7 100H.: (8.2...9.0) cm3/:0.4Dispersion 100H.: (0.8) 1/min: 250.0 2nd speed Contr.-rod trav. m: 4.9...5.1 Del.quantity cm3/ : 1.6...2.0 100H.: (1.3...2.2) cm3/: 0.3 Dispersion 100H.: (0.6) SLEEVE POSITION Control-lever position Degree: -1 1/min: 1050 Speed Cont.-rod travelmm: 15,20...17.80 FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Speed 1/min: 900 Charge press. hPa: 700 Del.quantity cm3/: 85.0...87.0 1000H.: (82.0...90.0) Dispersion cm3/: 4.00 1000H.: (8.00) HIGHEST RATED SPEED Setting point: 1/min : 1050 Contr.-rod trav.mm: 16.5 Testing: 1st c-rod trav.mm : ? 1/min : 1050...1060 Speed 2nd c-rod trav.mm : 4.00 1/min : 1130...:150 Speed 4th speed 1/min: 1250

C-rod trav.mm : 0.00...1.00

LOWEST RATED SPEED I Control-lever

position degrees: 8...16

Testing:

Speed 1/min: 100 C-rod trav.mm min: 6.50 Speed 1/min: 250

C-rod trav.mm : 4.70...4.80

Rémarks:

BOSCH INJ. PUMP TEST SPECIFICATIONS SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Note inst. in remarks column Test sheet : RVI 8,8 A SD mark cyl. no. : 1 Edition : 12.09.86 Superceeded : 4.81 START OF DELIVERY DIFFERENCE : ISO-4113 Calibrating oil betw.c-rod trav.mm: 10.00...11.00 Combination no. : 0 401 846 460 BASIC SETTING Injection pump Pump designation : PE6P120A320RS436 1st speed 1/mi: 700 EP type number : 0 411 826 118 Contr.-rod trav.mm: 10.00...10.10 Governor Governor design. : RQ750PA595 Governer no. : 0 421 801 1 : 0 421 801 148 Del.quantity cm3/: 17.2...17.6 100H.: (16.9...17.9) Customer-spec. information Customer : RVI Dispersion cm3/:0.5: MID (S) 062030 Engine 100H.: (0.9) TEST BENCH REQUIREMENTS 1/min: 250.0 2nd speed Contr.-rod trav. m: 5.4...5.6

Del.quantity cm3/: 1.5...2.1

100H.: (1.2...2.4)

Dispersion cm3/: 0.8

100H.: (1.2) Calibrating-oil inlet temp. °C : 38...42 Overflow valve : 1 417 413 025 FULL-LOAD DELIV. AT FULL-LOAD STOP Inlet press., bar: 1.50 Calibrating nozzle-holder 1st version : 0 681 443 022 1/min: 700 assembly Speed Del.quantity cm3/: 172.0...176.0 1000H.: (169.0...179.0) Dispersion cm3/: 5.00 1000H.: (9.00) Opening pressure, bar : 172...175 Test inj. tubing : 1 680 750 060 HIGHEST RATED SPEED Outside diameter Testing: 1st c-rod trav.mm : 9.00 Speed 1/min : 750...755 x Wall thickness : 8.00x2.00x1000 x Length mm 2nd c-rod trav.mm : 4.00 Speed 1/min : 776...789 4th speed 1/min : 900 (A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. C-rod trav.sem : 0.00...1.00 per values ____ START OF DELIVERY Test pressure, bar: 25...27 Remarks:

Prestroke mm

: 2.80...2.90

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1-5-3-6-2-4

: (2.75...2.95)

Note inst. in remarks column

: BET 8,8 A 2 Test sheet : 12.09.86 : 7.84 Edition Superceeded Calibrating oil : ISO-4113

Combination no. : 0 401 846 481

Injection pump

Pump designation : PE6P120A320RS383 EP type number : 0 411 826 109

Governor

Governor design. : RQV275...1100PA425-1 Governer no. : 0 421 813 369

Customer-spec. information

Customer : RVI

Engine : MIDS 062030

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. C

: 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar: 1.50

Calibrating nozzle-holder

: 1 688 901 019 assembly

Opening

: 207...210 pressure, bar

Perforated-plate

diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter x Wall thickness

: 6.00x1.50x1000 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 2.80...2.90 Prestroke mm

: (2.75...2.95)

Contr.-rod trav.mm: 9.00...12.00

Cam sequence : 1- 5- 3- 6- 2- 4 Dispersion cm3/ : 5.00 1000H.: (9.00) HIGHEST RATED SPEED SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) 1st version Control-lever position degrees: 62...68 SD mark cyl. no. : 1 Setting point: START OF DELIVERY DIFFERENCE. Speed 1/min : 1170 Contr.-rod trav.mm: 16.5 betw.c-rod trav.mm: 10,00...11.00 Testing: BASIC SETTING 1st c-rod trav.mm : 13.20 Speed 1/min: 1155...1165 2nd c-rod trav.mm : 4.00 1st speed 1/mi: 1100 Speed 1/min: 1315...1345 Speed 1/min: 1450 th speed 1/min: 0.00...1.00 Contr.-rod trav.mm: 14.20...14.30 4th speed Del.quantity cm3/: 15.1...15.3 LOWEST RATED SPEED I 100H.: (14.8...15.6) Control-lever position degrees: 7...15 Dispersion cm3/: 0.5Testing: 100H.: (0.9) 1/min : 200 Speed C-rod trav.mm min: 8.50 2nd speed 1/min: 275.0 Contr.-rod trav. m: 8.6...8.8 Speed 1/min: 275 : 5.40...5.60 C-rod trav.mm Del.quantity cm3/ : 1.3...1.9 100H.: (1.0...2.2) CONSTANT REGULATION cm3/:0.81/min : 275...365 Dispersion Speed 100H.: (1.2) compensator (LDA, ADA, ALDA) (B) Setting of injection pump with externally-mounted governor 1st version SLEEVE TRAVELS Setting 1/min : 500 1st speed 1/min: 275 Speed hPa : 700 Sleeve travel mm: 1.20...1.30 Pressure Contr.-rod trav.mm: 14.20...14.30 2nd speed 1/min: 450 Sleeve travel mm: 3.30...4.00
3rd speed 1/min: 800
Sleeve travel mm: 6.10...6.30 Measurement 1/min : 500 Speed 4th speed 1/min: 1100 Sleeve travel mm: 7.90...8.00 1st pressure hPa : -C-rod trav.mm : 12.40...12.50 SLEEVE POSITION 2nd pressure hPa : 230 Control-lever position C-rod trav.mm : 13.70...13.80 3rd pressure hPa : 180 Degree: -1 17min: 1170 C-rod trav.mm : 12.80...13.00 Speed Cont.-rod travelmm: 15.20...17.80 SWITCH-OVER POINT FULL-LOAD DELIV. AT FULL-LOAD STOP 1/min : 195 (215) Speed FUEL-DELIVERY CHARACTERISTICS 1st version Charge press. hPa : -Speed 1/min: 1100 Charge press. hPa : 700 1/min : 500 Speed Del.quantity cm3/: 151.0...153.0 1000H.: (148.0...156.0)

Del.quantity cm3/: 87.0...89.0 1000H.: (84.0...92.0) Remarks: N22

Note inst. in remarks column

Test sheet : BET 8,8 A 1 Edition : 12.09.86 Superceeded : 10.83 Calibrating oil : ISO-4113

Combination no. : 0 401 846 488

Injection pump

Pump designation : PE6P12OA32ORS383 EP type number : 0 411 826 109

Governor

Governor design. : RQV275...1200PA425-2 Governer no. : 0 421 813 403

Customer-speca information Customer

: MIDS 062030 Engine

1st version kW : 165.5 Speed 1/min: 2400

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. C : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar: 1.50

Calibrating nozzle-holder

: 1 688 901 019 assembly

Opening

: 207...210 pressure, bar

Perforated-plate

diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter

x Wall thickness

: 6.00x1.50x1000 x Length mm

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values ____

START OF DELIVERY

Test pressure, bar: 25...27

: 2.80...2.90 : (2.75...2.95) Dispersion cm3/: 5.00 1000H.: (9.00) Prestroke mm Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1 = 5 - 3 - 6 - 2 - 4 HIGHEST RATED SPEED 1st version Control-lever position degrees: 60...68 SD ang. spacing CS: 0-60-120-180-240-300 Tolerance + - : 0.50 (0.75) Testing: 1st c-rod trav.mm : 12.90 Speed 1/min : 1245...1255 2nd c-rod trav.mm : 4.00 SD mark cyl. no. : 1 Speed 1/min: 1395...1425 4th speed 1/min: 1550 C-rod trav.mm: 0.00...1.00 BASIC SETTING 1st speed 1/mi: 1200 Contr.-rod trav.mm: 13.90...14.0 LOWEST RATED SPEED I Control-lever Del.quantity cm3/: 14.9...15.1 position degrees: 5...13 100H.: (14.6...15.4) Testing: Speed 1/min: 200 C-rod trav.mm min: 7.80 cm3/: 0.5 Dispersion Speed 1/min : 275 C-rod trav.mm : 4.70...4.90 100H.: (0.9) 1/min: 275.0 CONSTANT REGULATION 2nd speed Contr.-rod trav. m: 4.70...4.90
Del.quantity cm3/: 0.8...1.4
100H.: (0.5...1.7)
Dispersion cm3/: 0.8
100H.: (1.2) Speed 1/min: 275...380 compensator (LDA,ADA,ALDA) 1st version Setting (B) Setting of injection pump with Speed 1/min: 500 Pressure hPa: 700 externally-mounted governor Contr.-rod trav.mm: 13.90...14.00 SLEEVE TRAVELS 1st speed 1/min: 275 Sleeve travel mm: 1.10...1.20 Measurement 2nd speed 1/min: 450 Sleeve travel mm: 3.40...3.80 1/min : 500 Speed 3rd speed 1/min: 850 1st pressure hPa : -C-rod trav.mm : 12.20...12.30 Sleeve travel mm: 5.40...5.60 4th speed 1/min: 1200 2nd pressure hPa : 225 C-rod trav.mm : 13.40...13.50 3rd pressure hPa : 185 Sleeve travel mm: 7.60...7.70 C-rod trav.mm : 12.50...12.70 SLEEVE POSITION Control-lever position Degree: -1 1/min: 1310 SWITCH-OVER POINT Speed 1/min: 195 (295) Cont.-rod travelmm: 15.20...17.80 FUEL-DELIVERY CHARACTERISTICS FULL-LOAD DELIV. AT FULL-LOAD STOP 1st version Charge press. hPa : 700 1st version Speed 1/min: 700
Del.quantity cm3/: 143.0...149.0
1000H.: (140.0...152.0) Speed 1/min: 1200 Charge press. hPa: 700 Del.quantity cm3/: 149.0...151.0 1000H.: (146.0...154.0) Charge press. hPa : -Speed 1/min: 500

Del.quantity cm3/: 90.0...92.0 1000H.: (87.0...95.0) Remarks:

Note inst. in remarks column

Test sheet : RVI 9.8 B 2 Edition : 12.09.86 Superceeded : 12.09.86
Calibrating oil : ISO-4113

: 0 401 846 497 Combination no.

Injection pump

Pump designation : PE6P120A320R\$438-1

EP type number : 0 411 826 133

Governor

Governor design. : RQV275...1200PA648

Governer no. : 0 421 813 345

Customer-spec. information Customer

Engine : MIDS062030

1st version kW : 150.0 1/min: 2400 Speed

TEST BENCH REQUIREMENTS

Calibrating-oil inlet temp. °C : 38...42

Overflow valve

: 1 417 413 025

Inlet press., bar: 1.50

Calibrating nozzle-holder

: 1 688 901 019 assembly

Opening

pressure, bar : 207...210

Perforated-plate

diameter mm : 0,8

Test inj. tubing : 1 680 750 067

Outside diameter

x Wall thickness

x Length mm : 6.00x1.50x1000

(A) Injection pump setting values Insp. values in parentheses Set constant delivery quant. per values

START OF DELIVERY

Test pressure, bar: 25...27

: 3.50...3.60 Prestroke mm : (3.45...3.65) Contr.-rod trav.mm: 9.00...12.00 Cam sequence : 1- 5- 3- 6- 2- 4 SD ang. spacing $^{\circ}$ CS: 0-60-120-180-240-300 Tolerance + - $^{\circ}$: 0.50 (0.75) SD mark cyl. no. : 1 BASIC SETTING 1st speed 1/mi: 1200 Contr.-rod trav.mm: 10.20...10.30 Del.quantity cm3/: 13.3...13.5 100H.: (13.0..,13.8) cm3/:0.5Dispersion 100H.: (0.9) 1/min: 275₀0 2nd speed Contr.-rod trav. m: 6.40...6.60 Del.quantity cm3/: 1.5...2.1 100H.: (1.2...2.4) Dispersion cm3/:0.8100H.: (1.2) (B) Setting of injection pump with externally-mounted governor SLEEVE TRAVELS 1st speed 1/min: 275 Sleeve travel mm: 1.20...1.40 2nd speed 1/min: 450 Sleeve travel mm: 3.30...4.00 3rd speed 1/min: 850 Sleeve travel mm: 5.90...6.20 4th speed 1/min: 1200 Sleeve travel mm: 8.20...8.40 SLEEVE POSITION Control-lever position Degree: -1 17min: 1230 Speed Cont.-rod travelmm: 15.20...17.80 FULL-LOAD DOLLIV. AT FULL-LOAD STOP 1st version Speed 1/min: 1200 Del.quantity cm3/: 133.0...135.0 1000H.: (130.0...138.0) Dispersion cm3/: 5.00 1000H.: (9.00)

HIGHEST RATED SPEED 1st version Control-lever position degrees: 61...69 Testing: 1st c-rod trav.mm : 9.20 Speed 1/min : 1255...1265 2nd c-rod trav.mm : 3.90 Speed 1/min: 1355...1385 4th speed 1/min: 1500 C-rod tray.mm : 0.00...1.00 LOWEST RATED SPEED I Control-lever position degrees: 8...16 Testina: Speed 1/min : 200 C-rod trav.mm min : 8.00 Speed 1/min : 275

CONSTANT REGULATION
Speed 1/min: 275...360

SWITCH-OVER POINT Speed 1/min : 195 (215)

C-rod trav.mm : 4.90...5.10

FUEL-DELIVERY CHARACTERISTICS Speed 1/min : 750

Del.quantity cm3/: 116.0...122.0 1000H.: (113.0...125.0)